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FORMERLY

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VOL. CXII., No. 15
WHOLE No. 3240

NEW YORK, SATURDAY, APRIL 10, 1920

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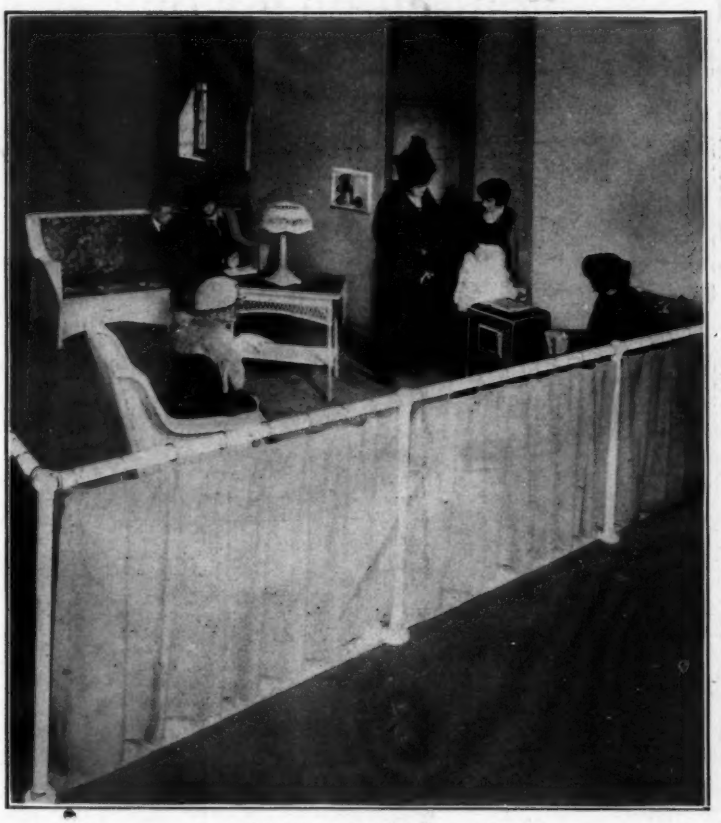

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See pages 11 to 13, this issue.

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American
Gas Engineering Journal

FORMERLY THE AMERICAN GAS LIGHT JOURNAL

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Norfolk Sets the Pace in Dealing Equitably With the Utilities

Commission Composed of Business Men Concerns Itself Primarily in Making Certain That City's Future, Its Industrial Development and Comfort and Convenience of Its Citizens Shall Not Be Jeopardized by Down-in-the-Heel Utilities

By EUGENE C. MILES

Editor American Gas Engineering Journal

When the question of increasing the rate of the City Gas Company of Norfolk from one dollar and twenty cents net to one dollar and sixty cents net came up before the Virginia State Corporation Commission, the unique spectacle was presented of the city concerned, being to practical effect the petitioner before the court, of public utility specialists retained by the city being actually the advocates of the gas company's cause after determining the facts of the case.

The people of Norfolk are no more desirous of paying higher for anything and everything than is the average run of American citizen. But the people of Norfolk apparently have the ability to see a stonewall when they face it, to exert their minds a trifle and see the other side of things—not only their own side.

And the people of Norfolk are vitally and intelligently concerned with the present well-being and future development of the city of Norfolk.

When a municipal utilities commission, composed of practical business men with no private prejudices to gratify and no political axes to grind, perceived that these things were being threatened by the condition of the utilities, suddenly changed by war conditions and their aftermath, it didn't take time off to indulge in a stupid campaign of abuse. It set about to find a remedy.

The gas company felt that it could keep up, that it could be the kind of a gas company the city's interests required, with higher rates.

Being composed of practical business men, the commission again digressed from the beaten path. Ordinarily the suggestion of such a remedy would have called forth a perfect torrent of eloquence as to the proverbial greed of gas companies.

Norfolk's commission neither agreed that the gas company's suggestion provided the remedy, nor did it deny it. First it called in a man who knew the practical side of these matters. Norfolk's commission is unique. It makes its findings only after it knows the facts and is competently advised.

But it did not retain an expert of the kind who comes already committed to show why rates should go down rather than up.

The Norfolk gas company got its increase. Taking the public press as the reflection of public opinion, the people of Norfolk are well pleased with the result, not because they really like to pay a third more for their gas, but because, truly believing that only at such price in these times they can have an adequate gas service, the people of Norfolk feel that even this is a cheap means of insuring the development of the city of Norfolk. Down there they are intelligent enough to realize that half-bankrupt utilities are a hopeless drag on civic progress. They do not want to scare capital away from their city. They want to attract it to it. Norfolk has too promising a future ahead of it to risk tossing it away by an unfair penny wise policy.

The story is interesting.

How the City Is Governed

Under the provisions of its 1918 charter, the city of Norfolk, Va., is governed by a council of five members elected at large, the present body being composed of A. L. Roper, president; Major I. W. Truxton, C. E. Herbert, H. L. Butler and J. Watts Martin. C. E. Ashburner is city manager and R. W. Peatross, Esq., city solicitor. All matters involving interests of the city in connection with public utilities are referred to the Norfolk Public Utilities Commission, a body appointed by City Council and now constituted in Major C. L. Wright, chairman, and W. W. Gwaltney, R. L. Dobie, W. E. Doherty, M. C. Hawkins and Hugh M. Kerr. The members of council and commission and their legal and business advisers are leading and representative citizens of Norfolk, practical business and professional men with no political axes to grind, concerned with and serving only the real interests of their city.

Think First of Welfare of Norfolk

The primary purpose for which this commission was created was to investigate causes for deficiencies in service provided by the public service companies in Norfolk and to develop the necessary corrective meas-

ures, subject, of course, to approval of the City Council and State Corporation Commission of Virginia.

In approaching the difficult problem thus thrust upon it, the Public Utilities Commission saw immediately that the only channel for constructive accomplishment lay in replacing the former spirit of antagonism between city and companies with one of real and honest co-operation. An absolutely new deal was seen and felt to be necessary by city and company to the end that Norfolk's future would no longer be jeopardized by a continuation of obsolete and ruinous policies of the past, strangling alike the city's development, the comfort and convenience of her citizens and the prosperity of its public utility businesses.

Realizing the urgent need of the situation for comprehensive and unprejudiced study as a step precedent to a practical common sense solution of the public service problem in Norfolk, the city and company agreed to proceed upon the broad platform that there was but one side to the public utility question in Norfolk—as elsewhere—that of producing and maintaining adequate and satisfactory service to the public. This was recognized as the vital thing, and that to plan therefore through the adoption of constructive and not destructive methods offered the only hope for a real solution.

As a means to this end the Public Utilities Commission retained A. Merritt Taylor, of Philadelphia, to develop a financial, construction and operating program essential to rehabilitate the property and credit and, as a necessary consequence, the service provided by the Norfolk public utilities. On account of his achievements for the city of Philadelphia for the Federal Government during the war, and in the reorganization, construction and operation of many large public utility properties, Mr. Taylor was selected as the man of the needed qualifications acceptable to both the city of Norfolk and its public service companies. Mr. Taylor retained Charles B. Cooke, Jr., as his engineering associate for the conduct of this work. Mr. Cooke is a member of the firm of Kelly, Cooke & Co., consulting engineers of Philadelphia and New York, known widely on account of its work in the operating and economic problems of public utilities.

Their Attitude an Open Book

One of the first questions to demand equitable settlement arose in connection with the application of the City Gas Company of Norfolk for an increase in its rate from $1.20 to $1.60 net. As a result of a most thorough study and analysis of local operating costs made by Mr. Taylor and Mr. Cooke, a report was submitted to the city officials recommending that the increase in rate be allowed. This report, which, according to the *Virginian Pilot*, of Norfolk, "is declared by those most familiar with conditions to be one of the clearest and fairest of any report of its kind ever made in this city," is remarkable for four unusual reasons:

1.—Its common sense treatment of the vexed question of "value for rate-making purposes."

2.—Its understandable presentation of the operating cost factors and the weight of their variations in development of service rates.

3.—Its clear enunciation of basic principles and policies to which municipalities should adhere for the protection of capital invested for public service, and

4.—The adoption and approval of such principles and policies and the specific findings of the report itself by formal corporate action of Council and Public Utilities Commission of the city of Norfolk, copies of which are given below.

Resolution Adopted by Council of the City of Norfolk

Whereas, The hearing before the State Corporation Commission of the application of the City Gas Company of Norfolk for an increase in gas rates in the city of Norfolk has been set for March 29, 1920, making it necessary for immediate action by the city council upon the report of A. Merritt Taylor; and

Whereas, it is necessary for the immediate preservation of the public welfare that proper preparation may be made by counsel for the city to protect the city's interests at said hearing by adopting the policy and recommendations embodied in the said report of A. Merritt Taylor, an emergency is set forth and declared to exist under Section 15 of the Norfolk Charter of 1918; therefore be it

Resolved, By the Council of the City of Norfolk, that the report of A. Merritt Taylor of March 18, 1920, with relation to the rate case of the City Gas Company of Norfolk and the policy and the recommendations set forth therein, be and are hereby approved and adopted by the city of Norfolk, and that Major C. L. Wright, chairman of the Norfolk Public Utilities Commission; R. W. Peatross, city attorney, and A. Merritt Taylor, be and are hereby requested and authorized to submit the aforesaid report and a copy of this resolution to the State Corporation Commission, and to uphold the interests of the city of Norfolk at the forthcoming hearing in the gas rate case.

This resolution, being an emergency measure, shall be in effect from its passage.

Adopted by council of the City of Norfolk, Virginia, March 19, 1920.

A TRUE COPY.

(Teste) R. E. Steed,
City Clerk.

Approved as to form,

R. E. Peatross,
City Attorney.

Resolution Adopted by the Norfolk Public Utilities Commission of the City of Norfolk, March 19, 1920

Resolved, That the report of A. Merritt Taylor of March 18, with relation to the rate case of the City Gas Company, and the policy and the recommendations set forth therein, be and are hereby approved and adopted.

Norfolk Public Utilities Commission,
(Signed) C. L. Wright, Chairman
W. R. Doherty
H. M. Kerr,
W. W. Gwaltney

Without question the city of Norfolk leads all other American cities in having thus voiced boldly its honest and constructive official and civic attitude toward capital invested within its borders. Those men of the city council and commission have with vision seen the practical needs of their city, and with courage have acted upon it without reference to political considerations. They have done Norfolk a service. Citizens in other places who are led by impractical theorists and governed by demagogues and time-servers who bait constructive capital for votes and plaudits of the unthink-

ing, may well take note of the character and actions of men now charged with civic responsibilities by the citizens of Norfolk.

On account of the importance of the issues raised and settled in the Norfolk gas rate situation, the substance of the report of the engineers on the investigation and recommendations, together with extracts from testimony before the State Corporation Commission, are reprinted below as an example of businesslike treatment by city representatives of a problem now before the industry at large.

REPORT OF THE CITY ADVISERS TO PUBLIC UTILITIES COMMISSION, CITY OF NORFOLK, VA.

Norfolk, Va., March 18, 1920.

Gentlemen.—In accordance with your request, an investigation has been made to determine whether the proposed new schedule of rates for gas service filed by the City Gas Company of Norfolk represents an equitable and just charge for the service to be supplied by this company to the citizens of Norfolk. This investigation has been completed, and I herewith submit a brief report of the result of the investigation, including the conclusions which are justified by the facts.

Exhibits "A" and "B" show respectively the rate schedule now in force and the proposed new schedule, which in effect provides for a net increase in rate to the consumer of 40 cents per 1,000 cu. ft., as well as for an increase in the minimum bill from 50 cents to 75 cents per month applying to consumers using less than 400 cu. ft. per month.

In approaching the study of the important questions raised by the proposed rate increase, I have, as a representative of the interests of the city of Norfolk, had developed by Charles B. Cooke, Jr., my associate, the facts of the case based upon a recognition of this broad cardinal principle:

Capital legitimately invested in public utility properties must be safeguarded and protected by municipalities, both as to principal and as to a just and inviting return thereon after reimbursement to the company for expenses incurred in providing service.

Municipalities which ignore this cardinal principle are not entitled to the confidence of those who have capital to invest, and will be shunned by them.

Municipalities which adopt and adhere to this cardinal principle will be sought out as safe places to which capital will become readily available for the upbuilding of public utilities and other constructive enterprises.

At this time a sharp line of demarcation is being drawn between cities which safeguard capital invested within their borders, and cities which pursue the short-sighted and dishonest policy of baiting and destroying capital invested in public service.

It was the honest and far-sighted attitude of the city of Norfolk toward capital now invested in, and prospectively required for the upbuilding of, the public utility plants serving the city, as interpreted by your commission and by your city council which brought me to come here in aid of the just cause for which you stand sponsors.

OPERATING EXPENSES OF CITY GAS COMPANY—1920

As in the case of other gas companies, the City Gas Company of Norfolk is confronted with a period of abnormal costs of operation due to the unprecedented conditions in the oil and coke markets. As a result, the costs of these commodities, representing the two most important items of gas-making materials, have advanced to new high levels not previously encountered in the recorded experience of the City Gas Company.

In order to determine the expenses of the company during the coming year, an analysis was made of the company's operating accounts for the years 1914 to 1919, inclusive. This extended period was selected as a means of establishing the character and amount of various items of expense making up the totals for each year and for determining the extent of variations in these items which occurred year by year. Such an analysis gives a very fair and dependable basis for determining the amounts of the different classes of expense which will have to be met by the company during the year 1920.

	Years ended June 30						Year ended Dec. 31,
	1914	1915	1916	1917	1918	1919	1919
Production	$0.375	$0.353	$0.334	$0.356	$0.770	$0.947	$0.678
Distribution	0.098	0.101	0.093	0.097	0.088	0.120	0.144
Commercial	0.033	0.032	0.036	0.038	0.038	0.045	0.043
General and miscellaneous	0.052	0.060	0.078	0.121	0.093	0.120	0.115
Taxes	0.033	0.032	0.035	0.050	0.051	0.041	0.044
Operating expenses and taxes.	$0.591	$0.578	$0.576	$0.662	$1.040	$1.273	$1.024

Exhibit "C" shows the analysis of past operating expenses by years ending June 30, 1914 to 1919, and including the calendar year 1919, the figures being shown both on the basis of total amounts and on the various unit bases indicated. The following summary, condensed from extended detail analyses, shows the average operating expenses per 1,000 cu. ft. of gas sold in each year.

It will be seen from these figures that the cost of producing and delivering 1,000 cu. ft. of gas to the consumer, exclusive of any return on the capital invested in the business, has increased from $0.591 in 1914 to $1.024 in the year ended December 31, 1919. In the latter year the average cost of coke and oil to the company amounted to $9.55 per ton and 6.71 cents per gallon, respectively. The total cost of coke and oil in the same period was equivalent to $0.386 per 1,000 cu. ft. produced, or $0.44 per 1,000 cu. ft. delivered to consumer, after allowing for gas lost in distribution, etc.

Costs for Ensuing Year Uncertain

During the coming year the cost of coke and oil under new contracts which the company has been obliged to make, will amount to $12.50 per ton and 11.55 cents per gallon, respectively. The oil contract, in addition, provides that the price of 11.55 cents per gallon delivered will be increased or decreased at the rate of one-eighth cents per gallon for every increase or decrease in the published price of oil above or below a base of $5.50 per barrel. It is impossible to predict what oil prices will prevail during the coming year, but in view of the great oil shortage now existing which threatens serious curtailment of gas output of many gas companies all over the country, and considering the vast increase in the demand for oil in all branches of industry, it is considered that the company will probably have to pay more, rather than less, than the contract base price of 11.55 cents for its oil.

Based on the known consumption of coke and oil per 1,000 cu. ft. of gas at the company's plant, the increased cost of these commodities at contract base prices will amount to approximately 31 cents per 1,000 cu ft. of gas delivered during the coming year as compared with 1919 costs.

Exhibit "D" shows in detail the operating expenses, exclusive of any return on investment, to be met by the company during the coming year, of which a condensed summary is given below:

	Total Amount.	Per M. Cu. Ft. Sold.
Production (oil at 11.55 cents per gallon)	$537,500	$0.978
Distribution	71,650	0.130
Commercial	23,600	0.043
General and miscellaneous	55,000	0.100
Taxes	24,000	0.043
Total operating expenses and taxes.	$711,750	$1.294

For every 50-cent increase or decrease in the price of oil per barrel above or below $5.50 there will be a corresponding increase or decrease of the above total cost of $1.294 per 1,000 cu. ft., amounting to 5 cents per 1,000 cu. ft. delivered. For reasons above indicated, it is more likely that the cost will be greater rather than less than $1.294 per 1,000 cu. ft., exclusive of any return on investment.

It may be observed in connection with "general and miscellaneous" expenses that the amount charged therein for general officers' salaries amounted to only $4,707 during 1919, which represents a very moderate charge to the gas company for general administration, and indicates there has been no attempt to inflate gas expenses by excessive charge on overhead accounts.

Value of Gas Property for Rate Fixing Purposes

The cost of reproducing the physical property of the City Gas Company has been appraised by Messrs. Forstall and Robison, engineers of New York City, at $2,631,885, as of January 1, 1920. This figure is based upon a detailed inventory of property as of February 1, 1917, applying thereto prices current in January, 1918. Property items added between February 1, 1917, and January 1, 1920, have been added to the 1917 figures at actual cost and deductions have been made for the cost of property withdrawn from service in the same period. The appraisal figure of $2,631,885 is exclusive of the value of land owned by the gas company, and also of any allowance for "going concern" value and for "working capital" employed in the conduct of its business.

Therefore, if this appraisal figure were to be used as a rate base for 1920, it would be necessary to make additions thereto as follows:

Item	
1. Cost to reproduce physical property as of Jan. 1, 1920	$2,631,885
2. Land value (appraisal of committee appointed by city and company, March 19, 1920)	497,760
3. Going concern value at 15 per cent of actual historical cost of property	213,000
4. Average additional investment now being made for additions and betterments in 1920	130,558
5. Working capital, cash and materials	130,000
6. Total value for rate base for 1920	$3,603,203
7. Total annual return on item 6 at 8 per cent	288,256
8. Annual return on item 6 at 8 per cent per 1,000 cu. ft. sold	0.523

If the above basis were used to establish a rate for gas in Norfolk, the total net rate to consumers would be as follows:

	Per 1,000 cu. ft.
Operating expenses and taxes	$1.294
Return on rate base (Item 8 above)	0.523
Total net rate per 1,000 cu. ft.	$1.817

Inasmuch as the investment figure above established is derived by the use of high costs of material and labor prevailing in 1918, and assumes that the property is up to 100 per cent operating efficiency, it does not adequately reflect the gradual recession in price and value levels which may set in during the post-war period, and conditions for which due allowance should be made if the reproduction cost figures are to be used as a rate basis. Where historical cost cannot be satisfactorily established and it becomes necessary to resort to appraisal figures, the object should be to use labor and material costs designed to reflect the general average level of values during the future period in which the developed service rates may be expected to apply. Thus, if we could feel sure that present-day prices would be maintained for several years to come, during which period the company would have to raise new and refunding capital, then under such circumstances it would be wise to maintain value (of a property normally maintained) for rate-fixing purposes on the level of present-day prices. This would produce rates which would properly reflect conditions of capital and operating costs under which the company would have to live and for which provision would have to be made in its service rates.

(*Continued on page* 289.)

Accumulation of Industrial Business Has Effect in Complicating Coal Supply Problem of British Gas Companies

Effect of "War Gas" on Equipment — Gas from Sawdust — How English Gas Companies Are Taking Care of Disabled Employees

By L. W. ALWYN-SCHMIDT

In the matter of coal supplies it appears that there has been an inclination of the authorities in Great Britain to treat the gas industry in line with the other industries of the country, forgetting that the gas industry does not require coal as a fuel but as its principal raw material. Along with the general discussion of the subject it was stated that the English gas industry supplies between 50 to 80 per cent of its production to private consumers according to the location of the plant. It was also stated that over 400 of the English gas works have been compelled to operate with a coal reserve of one week only, a formerly unheard of condition in England. Large gas plants in the big industrial districts are leading a hand-to-mouth existence. Most English gas works have operated in the past with a 40 per cent summer and 60 per cent winter supply. This has worked fairly well in former years; it does not seem, however, to give the works the chance to work up a coal reserve. The reasons for the failure of the former policy are not stated in the press. Explanation, however, is forthcoming in private letters to the writer. It appears that England has experienced during recent years a considerable increase in the demand of gas for industrial purposes. Many industries have gone over to the use of gas and in this manner was added to the clientele of the gas companies not only a very powerful but also a very regular consumer. Private gas consumption fluctuates heavily during the summer months. Industrial consumers require about the same quantity every month. An increase in the industrial consumption must make itself felt immediately in the coal consumption of the gas works. The 40 per cent coal deliveries during the summer that would have been perfectly sufficient with a large percentage of private consumers proved to be insufficient in the face of the permanent demand of the industrial consumers. When autumn came no reserves had been accumulated and none could be built up ever since. To bring the deliveries in line with the demand for gas it is now proposed to change the whole coal distribution system and to give the gas works an all year round even supply of coal. This would be somewhat in excess of the actual demand in the summer months, and the gas works would enter the winter with a reserve large enough to guard them against a sudden breakdown in the deliveries.

Effect of War-Time Gas Upon Equipment

English gas works are still busy in clearing away the encumbrances left over from the war. War-time gas, as it is frequently called, was not exactly beneficial to the equipment, and repairs from this source are still very frequent. This aspect of the situation was discussed in a paper read by James M'Ghee before the Scottish Junior Gas Association. It is mentioned in the course of this paper that one of the results of the use of war-time gas has been an excessive internal corrosion of the service pipes, meters, and consumers' fittings. This is not only confined to the older services, but is noticeable also in iron pipe installations of comparatively recent date. In fact, the old pipes seem to have stood the strain often better than the new ones, probably owing to their being well saturated with the good old fat gas. No doubt a contributory cause must be found in the quality of the steel that was used for the new equipment, which, according to the speaker, is more easily scaled and has not the same rust resisting properties as the wrought iron pipe of twenty years ago. The tinned steel used for the manufacture of dry meters is claimed to be more readily oxidized and liable to pitting than the old charcoal tinned iron sheets. The speaker pointed out the interesting fact that in Glasgow where dry meters are used universally, it is quite common to find galleries, valve boxes, etc., pitted in such a manner as to be very easily perforated. The diaphragms are found dried up and tearing like a piece of brown paper, in many cases in meters not two years in the district; showing, if one might use the term, the gas also to be oil-hungry.

The cause of this trouble is certainly interesting to know for gas engineers in this country, and the explanation given by the speaker, therefore, demands considerable attention. He quotes the dictum of one engineer: "As long as you have oxide purification, with free oxygen going forward, combined with the moisture of the gas and probably more than a trace of cyanides and sulphur compounds you need expect nothing else." Is oxide purification, as at present conducted, with all its undoubted economies on the manufacturing side so great an advantage on the lime system as claimed? Do not the increased costs on the distribution side fairly well counterbalance these economies? The cost of meter repairing has gone up immensely in England as stated already in an earlier article.

Undermining the Monopoly

There is always something new along the line of public utility privileges. English gas companies, however, are confronted just now with an issue of more than exceptional interest. Gas managers in this country know only too well how enjoyable a railroad may be as a customer, and no gas works would willingly lose the railroad if it can help it. In England railroads have followed the custom of buying gas from the local gas companies and the arrangement seems to have worked

admirably. Comes now the Great Northern Railway Company before Parliament with a bill that will enable it to carry water, gas, or electricity, along its tracks wherever it likes to. This means, in other words, the company should like to buy gas, water, or electricity where it is cheapest and pipe it upon its own property to any of its stations. Naturally the small local gas works are up in arms against the proposal which requires the consent of the Government to take effect. It is no simple matter for them to have their local field of distribution invaded, and once a precedent is created there is no knowing where the invasion will end. The proposed bill seems to raise a rather fine point of law. Naturally, if a certain property is located on the boundary of a district and in the reach of two gas works it is up to the owner to decide by which he desires to be served. It is now up to the British Parliament to decide whether the same applies to railroad property.

European Equipment Industry Grows

The war still looms up with reference to many matters concerning the production, distribution and consumption of gas. It has rendered the nations of Europe more self-conscious than they used to be in the past, and they are setting out now to remedy many of the defects under which their national industrial life suffered in the past. Among others complaints were often heard those about the supremacy of the English and German makers of gas equipment in other European countries. English and German equipment practically dominated the market, and with the exception of France nearly all European gas works were using equipment made in either of the two countries. A change seems now to have come about. More American equipment is used and new national industries making gas equipment have been founded. Italy has just seen the formation of a 1,200,000 lire company for the manufacture of gas equipment, and Spain has entered upon its production on a larger basis than before the war. This promises generally well for the gas industry. The lack of nationally made gas equipment has given the electrical industry an undue advantage in the South European countries. The new equipment industry will now no doubt look out for itself and see that it finds a good market for its output.

The writer has recommended of late frequently the combination of gas and electrical works for the purpose of obtaining the best results of the coal as of the gas and electrical energy. The subject has now been taken up in Europe and has found discussion during a recent meeting of the Power Gas Corporation, Ltd., of Manchester. The chairman, E. Lloyd Pease, pointed out that he was rather in favor of a number of small electrical power stations coupled to gas works instead of the super power plants now projected in England. "If a ton of coal is passed through a gas works, it will give the citizen 12,000 cu. ft. or more of gas for light and heat, also about 20 lb. of sulphate of ammonia (a sufficient amount of fertilizer for a quarter of an acre), also tar and oils, and in addition about 10 cwt. of coke. If he were a manufacturer he could obtain from this coke about 1,000 hp. hours of electricity or gas for heating purposes. A similar ton of coal passed through a superstation would produce about 1,500 hp. hours for delivery and nothing more." The controversy about the uses and advantages of the large power stations that are now being constructed all over Europe, therefore, is opened, and it is to be hoped the gas industry will present its case well. It must be understood that really more is involved in the final outcome of this than the question whether Europe shall have a number of large electrical power stations or not. From the decision will depend the future of the power supply of the whole world during the next hundred years or so. One often wonders what would have become of the world if the electric dynamo had been discovered before the steam engine. So one may contemplate the fate of the world if it should decide to throw its luck now in with electricity to the exclusion of all other power producers. We have not enough coal that we can afford to throw away its very valuable by-products in the manner suggested by those favoring electricity exclusively. It would certainly be the better plan to make first all the use of coal that is possible and employ the remains finally for the production of electricity. This still does not exclude the possibility of large electrical central stations. Why, however, waste coal when these stations can just as well be operated by water power? European gas men will have to take the lead in the present controversy. It has come up first in Europe and finds only limited interest yet on this side of the Atlantic. But there is no denying that the experiments of Europe will be of material effect upon the similar development in this country. Let us well beware that no fundamental mistake is made in so important a decision as the present.

German gas works are still seriously put to how to get the coal for the upkeep of their plants. In many cases coal reserves have gone down to a few hours, and there are indications that certain cities will not be able to get sufficient coal during the later months of the present winter. The winter has been extremely severe, and with transportation conditions as they are it will be practically impossible to get coal to many of the smaller gas works. Experiments, therefore, have been made to supplement the coal by adding to it other gas producers. The city of Rosenberg, for instance, has experimented with sawdust, and reports very favorable results. Consequently large quantities of sawdust have been brought in the neighborhood and taken in store to be used in case of an emergency. The sawdust will be employed together with coal, and given a proper mixture a gas can be produced showing only a loss of 10 per cent in lighting and heating efficiency against gas produced with coal only. Similar experiments have been resorted to in other cities. But even with the most careful use of coal it has not been always possible to give a full supply of gas, and many large cities are compelled to close down the delivery of gas for any purpose during certain hours of the day.

Considering that very good results were obtained in Canada with the use of straw there is really nothing surprising in that. But the introduction of sawdust in the range of gas making materials no doubt opens some possibility well worth for further discussion. We have many communities in this country that have more sawdust than they like to have and where special steps are taken to remove it. Could these cities not also make use of it for their gas works? Coal has become very expensive and is not always ready at hand. Sawdust can be had locally and, therefore, is cheap. What effect its employment will have upon by-product making

(*Continued on page* 292.)

In Good-Will Campaign American Gas Association Hopes to Win for the Gas Industry That Degree of Confidence Its Services Merit

Regulatory Troubles Not with Law and Regulation as Such, but in Manner of Their Application—An Enlightened Public a Requisite to Fair and Equitable Treatment of the Utility

By CHARLES W. PERSON

Scan the pages of your daily newspaper and you will see that the power of the printed word—the tremendous force of newspaper white space to mould the minds of men—is being utilized to-day as never before.

Millions of dollars are being spent annually in national publicity campaigns for the fundamental purpose of wooing the Goddess of Public Opinion. She is a fickle and inconstant goddess, but who will deny that she is more powerful to-day than all the mechanical contrivances of man put together? To treat her lightly or to meddle with her is to openly solicit trouble. To ignore her altogether is to court disaster.

Even the most unimaginative business man has come to realize the power of public opinion. He is aware of the fact that the public not only has power, but it has come to know that it has it. There is no better evidence in the world of this than in the gas business. We are beset on every side by laws and regulations which, in the final analysis, are but the real and tangible things demanded by a public which refuses to be denied.

Trouble Not with the Laws

The trouble is not with law and regulation, as such. The success of our business depends upon their fair and just and equitable application, and they never will be fair and just and equitable until the public which is back of them knows all the facts of our business and makes its judgments sound and constructive.

One of the most successful publicity experts in the country said recently:

"If the men who are in charge of a particular company enjoy the complete confidence of the people of that community, 50 per cent of that company's troubles are over. With such men enjoying the confidence of the people, telling the people the truth, and the people believing it, the people in the long run will do what those men believe to be reasonable, because the people will believe in them and that what they believe to be reasonable is reasonable."

The gas industry needs to take the public into its confidence. It needs to put the facts and figures of its business, the intricate conditions under which it operates, and the perplexities and problems which it has to meet every day, before the American people in a way that will carry conviction. The American people are fair and they will listen to us if we will only tell them the things they should know.

Because our industry is national in scope our story should be told nationally and this can be accomplished in no better way than by an association which is truly representative of the industry, the American Gas Association.

A Start Has Been Made

It is heartening to know that a start has been made—a considerable start—in the series of "good-will" advertisements which the Advertising Section is now preparing for the use of member companies. The managing committee, which has this work very much at heart, has gone ahead with its program in the belief that the industry needs a campaign of "good-will" advertising at this time more than it ever needed it before or will ever need it again. Hardly more than a month has passed since the copy for the first advertisement was prepared at headquarters and the secretary was instructed to proceed with it. Shortly following this, the copy for the second advertisement was prepared and proofs were struck off. On the strength of these two advertisements alone, orders for the entire series of twelve advertisements have been forwarded to headquarters from gas companies in all parts of the United States. Enough orders have been received so far to justify the belief of the managing committee that the gas industry is awake to the opportunities of a national publicity campaign at this time, and that it stands ready and willing to lend its support to an undertaking which is bound in time to dispell misunderstandings and to bring about better relations with the public.

For the benefit of gas company members of the association, and particularly the officials of gas companies who may not have seen proof of the first two advertisements and the instructions which accompanied them, this opportunity is taken to give a somewhat detailed description of the campaign.

The Thought Behind the Advertisement

The advertisements are being prepared with the thought in mind of telling the public some pertinent facts regarding the gas business and the important part it plays in the

economic life of the community. Inasmuch as these are the first public policy advertisements ever prepared for the industry at large, it was necessary that some reference be made to the historical background of the industry. This was done in the first advertisement, entitled "This Is An Age of Gas." Facts and figures were also given in this advertisement to afford an idea of the national character of the industry.

The second advertisement, "Gas—A Necessity," tells its own story strikingly. Many gas companies were so impressed with the timely value of this advertisement and its allusion to bituminous coal and oil and the climbing cost of these two materials, that they placed their order for the series at once.

A flexible schedule of publication dates has been fixed so that the series may be published about the same time in all parts of the United States, as follows:

Advertisement No. 1.—March 8 to 22.

Advertisement No. 2.—April 5 to 19.

Advertisement No. 3.—May 3 to 17.

Advertisement No. 4.—May 31 to June 14.

And so on.

It is, of course, impossible for all companies to adhere to this schedule, in view of the fact that orders are still coming in to headquarters at the rate of three a day. Several companies intend to catch up with the schedule beginning with the third advertisement. This is not difficult to do, since there is a period of two weeks between the publication date of each advertisement.

Particular care has been taken to point out to companies ordering the advertisements that the text can be changed to meet local requirements or it can be eliminated altogether and new text substituted. Inasmuch as the advertisements are all to be of the three and four-column newspaper width and the border design is to be standardized, companies have been asked to save the matrices and electrotypes once they have been used and use them over again in any way they see fit.

It was originally intended to issue the series in a two-column size, but when this attempt was made, the text was so small as to be illegible. Several companies who ordered this size have now requested the three-column size instead.

The price for all twelve advertisements complete with matrices in either of the two sizes is $36; with electrotypes, $48. This charge is made to cover bare cost of art work, composition, original plates, proofs, etc.

At no time has it been the desire of the committee to prepare all twelve advertisements at one time. The plan is to write the advertisements one by one, and to make each as timely and seasonable as possible. The campaign will extend over a period of one year, one advertisement being issued a month.

Putting It Up to the Public

By S. G. Addison

"I wonder," said Peterson, "if we are not making a mistake by not putting more of our problems up to the public rather than relying upon our officers and the board of directors to solve them."

"What," inquired the Old Man, "put this crazy idea into your head?"

"Last night," answered Peterson, "I was at a meeting of our local engineering society. The speaker of the evening was a well-known chemist. He gave a very interesting talk, but what I heard after the meeting impressed me more than anything that he said. You know that after each of the meetings there is a more or less of a get-together meeting. Last night we had a buffet luncheon and everyone gathered around in groups, ate, smoked and talked.

"I happened to get into a group of chemists interested in the petroleum resources of the country. What they said proved exceedingly interesting to me. They were talking about the changes that have taken place in the industry during the past twenty-five years and they discussed the different methods of extracting gasoline from petroleum. I never realized before what great strides have been made towards changing all of the petroleum into gasoline. They were talking about a new process that is going to make it possible to change even more of it than before into gasoline. Besides, it seems that there is danger that our oil supplies in this country are not going to last much longer.

"As I listened to their talk it began to look to me as though we would have a great deal of difficulty in getting gas oil before very long. I understand that the price has gone up already and that some gas companies are finding it very difficult to get it at all."

"The gas-oil situation is becoming very serious," admitted the Old Man, "but we have several months yet to go on our old contract. I don't see what that has to do with putting our problems up to the public; in fact, I don't see how the public has anything to do about the oil shortage. What are you driving at, anyhow?"

"I've talked to you along these lines before," went on Peterson, "but I don't think that we are giving the plan enough attention. You see a public utility company is decidedly different from any other kind of a business enterprise in several respects. In a way, the public is our landlord, our financial backer and our customers.

"It is our landlord because we have to use public property such as streets and alleys in order to do business. We have a long term lease on these in the shape of our franchise. The public is our financial backer because we have to sell our stocks and bonds to the public. If there wasn't a good market for these, it would cost us a lot more to get the money that we have to have to do business and to prepare for future growth. Of course, if the public did not buy gas from us we would soon have to go out of business.

"Where the public has a more complete control over us, however, is in the control of our selling prices. I don't know of any other line of business that is in such complete control of the public. We can't make any sort of change without going to the public. If we need more money, we first have to have the issue of bonds or stocks approved by officials appointed or elected to represent the public, and whose jobs depend upon pleasing the public, and then we have to sell these stocks and bonds either directly or indirectly to the public. If we need to increase our rates, we have to secure the consent of public officials to do so.

"The public is really running our business. Our board of directors and our company officers can't do a thing without the consent of the public. It is true that we can borrow money at the bank, but the amount that we can borrow and the terms upon which we can obtain it are determined by the confidence that the public has in us. As far as I can see, everything depends upon what the public knows about us."

(*Continued on page* 296.)

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SIXTY-FIRST YEAR

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As the Journal Views It

Present Difficulty of Utilities in Securing Fair Rates a Passing Phase

In rate regulation we are living to-day in an age of unreason.

When regulation was established in the various States it was *said* that it was to act both ways—for the protection of the public and the welfare of the utilities.

But no one ever thought of its acting more than one way—that way towards bringing down rates.

This, nothwithstanding, far-sighted utility men hailed it as a blessing. Their only concern was that, in functioning, regulation should not bring rates down faster than progress in the way of producing and operating economies justified the reductions.

No one seriously considered the prospect that in the matter of costs, as represented in dollars, gas and electricity would, so as to speak, go backwards. We were learning so much more each year that passed, discovering so many new means of cutting down wastes, paring of labor costs despite rising wage scales, in saving money on production and distribution in general per unit sold that, despite possible rise—due to increasing curtailment of resources—in the cost of raw materials, the general opinion was that the necessary selling price of gas and electricity could not go up, if anything, they must constantly tend downwards.

Then came the upheaval, the unexpected—the extraordinary!

Utility commissions were brought to face the other phase of their responsibility.

Mentally they were caught napping. They had never contemplated such a possibility.

They looked to the public for a sign of its attitude. The public, too, was caught mentally napping.

The commissions floundered. Utility men despaired and are still despairing. They see in their mind's eye great enterprises, built up through a century floundering on the rocks, financially going to pieces unless adequate relief comes promptly—unless their situation is viewed actually as it is and dealt with accordingly.

Though the prospect has been dark indeed at times, seemingly hopeless, the stronger minds never really considered that the utilities structure would collapse. They knew that with enlightenment, mental readjustment, the period of unreason would give way to a period of reason. They trusted to destiny that the change would occur before it was too late. Such things have happened in this country before. Colossal disaster has been averted more than once, not by the planning of men, but by a freak of fate. It has been such occurrences that we have in mind when we speak of the luck of democracies.

Up to the present the course has seemed to tend away from justice and confidence in the utilities rather than towards it. That a hundred million more or less enlightened human beings could be so apathetic and indifferent to the situation of industries so vitally related to their welfare is in itself one of the wonders of this age of unreason.

But hopeful men have confidently awaited the trend in the other direction, the first faint budding of reason and intelligent understanding. Such men will see in the precedent set at Norfolk, in the public attitude towards the utilities there, as officially set down, a most hopeful sign. Some of them, the real optimists, will see in the event the first slight impetus that may set the ball rolling in the other direction, along the path that leads to reason.

The public attitude toward public utility companies is changing, they will read. The almost insuperable obstacles to successful operation brought about by the rise in material prices and the demands of labor are being overcome in many cases through equity and fair dealing between municipalities and public utility companies.

Municipalities dominated by demagogues and self-seeking politicians, who have concealed their selfish purpose under the guise of devotion to the public welfare, have refused to join in extending to these companies a reasonable measure of relief indispensable to their continued life and without which their capacity for public service must end. The pendulum accelerated by unreason and partisan appeal has swung through the path of oppression until chaos seemed imminent and thoughtful men have despaired of the coming of fairness and reason in time to avert the inevitable catastrophe.

The action of the Norfolk City Council and the Norfolk Public Utilities Commission, in adopting the principles, policies and findings laid down in the report of A. Merritt Taylor in the matter of rates for gas furnished by the City Gas Company, as described in the leading article of this issue, establishes a new policy in the treatment of public utilities by city governments, and marks a distinct step forward in the recognition of capital legitimately invested therein. The broad and just principle that—

"Capital legitimately invested in public utility properties must be safeguarded and protected by municipalities, both as to principal and as to a just and inviting return thereon after reimbursement to the company for expenses incurred in providing service," supplies a firm foundation upon which investors and public alike can base their efforts for the upbuilding of their community.

To assume that the effect of this far-reaching decision will be mostly to the advantage of the companies and their investors is to fail to recognize the basic fact that capital and public spirit when combined on the firm platform of justice and fair treatment, and directed by sane business judgment, will prove invulnerable partners in the furthering of civic interest and prosperity. Norfolk with seven railroads, with a harbor not excelled elsewhere on the American seaboard, and a progressive government, is naturally looking toward the development of existing facilities and the logical creation and fostering of public enterprise without which no community can enjoy a sound growth. What better method to realize this end could be conceived than public notice that capital seeking safe and profitable investment will here be accorded fair treatment and regarded as a friend and not a public enemy? Public welfare quickens and prospers when the peaceful march of progress is led by honest and intelligent individual initiative and municipal co-operation. It is wounded and often dies when these logical allies fall out and battle takes the place of united endeavor.

There is one comment to make on the Norfolk situation which is obvious to those who have followed the troubled course of public utility baiting: Much of the difficulty resulting in the present predicament of operating companies and the present intolerable conditions as affecting public service has arisen through the activities of the irresponsible theorists and those who may be aptly termed professional birds of prey, who, for the sake of the fee involved, excite public prejudice and undertake to depress the real values of public service properties in the public mind, and to undermine their credit and thus their capacity for service through vicious attack upon the developed earning powers of this class of business.

Enemies alike of companies and public, the nature of these gentry should be recognized and their ruinous activities blocked. City officials should not be deceived by the specious reasoning put forth by would-be public advisers of this stamp, who, innocent of all experience

in the practical solution of the problems so glibly talked about, manage to worm into the counsels of civic administrations, under the cloak of an academic expert. There they lay their eggs of distrust and suspicion, pocket their fee and depart, leaving a trail of destructive policies, theories and doctrine unrelieved by any evidence of constructive effort.

Norfolk has recognized sound business principles in calling to her assistance one fitted by character, training and attainment to guide her in the path of sane regulation. As financier and operator of public utilities and successful adviser of municipal bodies, Mr. Taylor's course has been marked by well-conceived constructive enterprises successfully administered and by the approval of public opinion. His selection of Charles B. Cooke, Jr., whose practical work in the economic and financial engineering problems of public utilities is well known, as his engineering associate for the conduct of this valuable work is in accordance with the policy which prompted the city of Norfolk to seek the services of Mr. Taylor. The whole situation presents an encouraging step forward in the solution of our public utility tangle.

We commend to our readers a careful reading of the proceedings in this case and the basic principles established, which mark an epoch in the treatment of public utilities by American municipalities.

Forethought in Buying

"Order your stock early" has been the annual plea of the appliance manufacturer. He has seen in such action on the part of the industry an opportunity to better plan his working program, and, as a result, obtain for himself and the gas company lesser costs and greater profit.

This year he utters the words not as a plea but as a warning.

Getting his materials is no longer the mere matter of routine that it once was. When there is a surplus one has but to beckon with his finger and look like a substantial bank balance to get his own delivery on anything he wants. In days of underproduction only the alert and highest bidders get anywhere near what they want when they want it.

There is no reason in the world why gas companies could not have accorded manufacturers this degree of co-operation before. Now it has become a case with them not merely of co-operating but of actually safeguarding their own interests.

It should be no very difficult task to at least approximate our needs for a season well in advance. This being done, we would be taking no very considerable chances in ordering now, say, two-thirds of that quantity. If there was a likely prospect of a considerable slump in prices in the meantime it would, of course, be the part of wisdom to make some arrangement protecting ourselves on this point. But, we must sorrowfully concede, we've looked for that price slump for a long time now and it still seems just as far away as it ever was. Business cannot stop while we go chasing rainbows.

The Outlook for New Construction

One has but to follow the news columns of a gas journal to realize that an unusual amount of new construction—as compared to recent years—is under way or projected by the gas companies.

This by no means indicates a building boom as such in the gas field. Such a development is, we are sorry to say, much beyond the realms of immediate possibility. Rates have not yet been adjusted to a plane where the average gas company is doing much better than hobble along. Managements have not yet generally accepted it as a fact that there is not going to be some tumble at least in the cost of building and materials.

The construction now being considered or undertaken is the "have-to" kind. Plants have reached such state of inadequacy that something simply has to be done if disaster is to be averted.

These enlargements are not of the kind that makes the gas man's heart glow with pride and satisfaction at the growth of his plant. The purchase money to build them is too hardly gotten. Its cost is added worry and tragic mental harassment. They are the gas man's response to the stern call of public service.

Correspondence

Is He a Lazy Salesman?

GENTLEMEN: I note in your issue of March 20 the editorial entitled "Is He a Lazy Salesman?"

Why the gas salesman is picked out to be spoken of in a discouraging manner I cannot see. It has been the writer's experience that the average gas salesman is as much of a hustler as the men in any other trade, providing he is given the proper co-operation of the sales department and the company.

So far as the salesman being able to sell high-priced goods is concerned, it undoubtedly takes a better man to sell equipment valued at a thousand dollars than it does to sell equipment valued at fifty dollars. Comparison cannot be justly made in this case. If the salesman is told to sell water heaters and gas ranges, he certainly cannot be criticised for not jumping into high-priced industrial and heating equipment unless he is trained and paid for that kind of work. Where the gas salesmen are given proper remuneration and training, they can sell any equipment that any other salesman can sell. The gas business has no apologies to make in this connection.

It is true that many manufacturers have sold equipment and then turned the jobs over to the

gas company. It is equally true that the gas company has put on a tremendous lot of business for the manufacturers. It would be an injustice for either to make any claim for monopoly of sales.

A Prime Essential

You hit the nail on the head when you say the gas company must expend a reasonable amount of money if it expects to put forward high-priced gas equipment. The salesman, of course, can do nothing unless he is given this backing and assistance. Even the most progressive gas companies are still far behind the manufacturers when it comes to co-operating with their sales forces. I believe that the successful gas salesmen who are selling high-priced equipment are making a much better showing, considering the co-operation and assistance they obtain, than even the manufacturers' representatives.

As to stock appliances, which cost considerably more than the most expensive domestic appliances, the statement is made that most of the sales of this type are made by the manufacturer and handed over to the gas company. In the writer's particular locality the contrary is the case.

If one goes into high-priced equipment it must either be in heating or industrial.

During the past year the salesmen in this district have put out high-pressure steam boilers ranging in price from $500 to $3,000, installed. The sales made of this one type of equipment alone aggregate $27,000. The placing of these boilers was due to the efforts of the gas company's salesmen absolutely unassisted.

During the same period nearly $40,000 worth of house-heating furnaces and low-pressure boilers were sold, ranging in price from $200 to $1,000, installed. Incidentally, every sale showed a profit.

During the same period there has been many sales of industrial furnaces frequently running up to a thousand dollars and more that have been sold entirely by the gas company's representatives. It is not the intention here to make a statement of all the work done by the salesmen in this one district, but rather to refute the inference that high-priced work cannot be accomplished by the gas man. To the writer's certain knowledge, similar good work is being done in many other localities. To get right down to brass tacks, there is no comparison at all between the average man who goes out to sell a thousand-dollar electric motor or a thousand-dollar machine of any kind and the gas man who must go out and sell a set of carbonizing furnaces for the same price.

Must Know a Great Deal

The gas man must, in this particular district at least, overcome all of the arguments which are inherent in a low-priced fuel-oil supply. It takes something better than just salesmanship to put this kind of stuff over and make it stick; it takes almost genius. It may be perfectly true that some gas companies are asleep at the switch and that their salesmen simply plod along, but it is very unfair to the men engaged that statements of this kind be made general when such splendid work is being accomplished in many localities. The fact that some gas companies will not actively push the sales end of the business does not justify condemnation of the entire sales force in the gas industry. I have seen a good many salesmen representing manufacturing concerns that were not worth their salt, but I would hesitate to make a statement on this account that manufacturing salesmen are generally without value. I think one trouble with the gas company officials to-day is that they do not realize what splendid work their salesmen are doing. They have little contact with them and cannot readily appreciate the obstacles which must be continually overcome. The work which the gas salesman naturally does in his daily grind toward creating "goodwill" is of great value, but is, as a rule, unappreciated.

When it comes to selling gas for heating and industrial work, it is difficult to appreciate the amount of energy and salesmanship required, unless one has been in intimate contact with that type of work. Gas salesmen are used to criticism and have even gone so far as to be buried a few times; but the gas business and its salesmen are still very much alive, and all that they ask when appraisal is made of their value is that the judges be competent ones.

Yours very truly,

H. M. Crawford,
Engineer Industrial Gas Bureau, Pacific Gas & Electric Company.
San Francisco, Cal.

Editor's Note: Mr. Crawford's letter is a very welcome contribution to these columns. It tells a great deal—yet, as applied to the whole gas industry, tells very little. What the Pacific Gas & Electric Company has the ability to accomplish, we regret very much to acknowledge, is by no means representative of what the general run of gas company is competent to accomplish.

Mr. Crawford's company had as its chief engineer in the gas department, for so many years that their exact number slips from our memory, E. C. Jones. The American Gas Engineering Journal strongly doubts if there is another man in the gas field who has as broad and complete confidence in gas as a superior fuel as has Mr. Jones. A company with such a mind high in its executive councils naturally would lend an attentive ear to the importunities of its salesman for even ambitious backing in the way of research, experiment and demonstration toward his obtaining a big installation. Such a company would not regard such an expense a speculation; it would regard it as an investment, since it would be certain in its own mind there could be but one result of the test—a demonstration of the superiority of gas for the task.

We judge the attitude of the Pacific Gas & Electric Company and its sales representatives merely from their actions and results, not from their intentions.

Most of us look for our big customers along the beaten paths, within range of existing gas mains. The Pacific company's men are in a truer sense engineers, since they look out beyond and see things that do not exist. A case in point is one of their largest customers. In this case they looked over to the shores beyond a broad estuary. The gas equipment that they hoped to sell represented an investment so huge in itself that the industrial plant

naturally could not be induced to buy without being decidedly *convinced*. And such convincing could not but require an exceptional mental attainment on the salesman's part. But before that equipment a costly gas must be bridged by a submerged supply line. Yet the sale was made. This is sales accomplishment in its highest sense.

This is the type of salesmanship Mr. Crawford sees about him. Is it natural that he could believe even in the existence of the type of salesmanship our editorial points out?

On one point Mr. Crawford evidently misreads our words, or perhaps our words have not truly made clear our meaning. Apparently he believes we find fault with the salesman. Quite the contrary, we believe the salesman is pretty much what the attitude of his company makes him.

If the company pays less compensation to its sales force than competent men can be gotten for, it must expect to content itself with incompetent men.

If it offers uncertainty of employment it cannot look to its salesmen to have much of an eye to permanent upbuilding. Most men's primary interest is their own interests. How foolish to expect a man who is extremely doubtful if he is to stay with a company a day, a month or a season to worry very much as to how it may fare after he has been listed among the departing!

Of course, the salesman is not going to go out of his way to sell things that require deep study and hard work if the company tells him to sell mantles, expects only that from him and pays him accordingly. This is a world in which very little is gotten for nothing.

Mr. Crawford is willing to concede to the manufacturer's representative a proportion of the sales in his territory. This is a thing we do not feel the gas company or gas man should concede to anyone. In sales of gas-using appliances the gas company man starts out with an advantage over all others. If he is sufficiently numerous, and equally competent, it is he who should sell everything. Sales made by others should be the merest accidents. Either we are the biggest pigs in our own puddle or we are not.

The AMERICAN GAS ENGINEERING JOURNAL concedes that Mr. Crawford has demonstrated that in places the implications laid down in the editorial in question do not apply. It does not concede that they are not, however, quite generally applicable. There is considerable room for improvement in the merchandising policies and practices of the gas companies.

Norfolk Sets the Pace in Dealing Equitably with the Utilities

(*Continued from page* 280.)

VALUE BASED ON HISTORICAL COST OF PROPERTY

In the particular case under consideration, records are fortunately available which show the amount of actual cash invested in the property from 1896 to date. In 1896 two prior companies, the City Gas Light Company and the Norfolk Gas & Electric Light Company, were consolidated into the present City Gas Company. The latter at that time issued $500,000 first mortgage bonds and $500,000 common stock, pursuant to the terms of the consolidation agreement, approved by an act of the General Assembly of Virginia. These securities were paid over to the former companies or their stockholders and the prior securities thereupon cancelled. The value of the consolidated properties was entered on the books of the City Gas Company by its former management at $971,627. Subsequently the Norfolk & Portsmouth Traction Company and the Norfolk Railway & Light Company acquired all of the $500,000 common stock of the City Gas Company, paying in cash and bonds therefor an aggregate amount of $342,937.50. This amount represents a bona fide investment of the above companies in the stock, but not in the property of the City Gas Company. It therefore cannot be regarded as a factor to be considered in "value for rate-fixing purposes," inasmuch as the $500,000 stock issue did not, so far as the records show, represent any cash investment in the property, and only represented what the owners thought the equity was worth. From information obtained from the minute book of the prior City Gas Light Company, its capital account (exclusive of working capital) amounted in June, 1896, to $459,879. After reviewing and weighing the data at hand, and in view of the frequent practice at the time the consolidation took place of representing all physical values in bonds, it is believed safe and fair to admit only $500,000 as the actual historical investment in the property in the period 1849 to 1896.

With $500,000 established as the starting point in 1896, the actual subsequent cash investment has been established by years from 1896 to 1920. Exhibit "F" shows details of additional investment since 1896, producing a total historical investment of $1,421,690 as of January 1, 1920. This figure may be used as the basis of value for rate-fixing purposes in 1920 by the addition of allowances for actual investments now under way, for going concern value, increment in land values since date of purchase, and for working capital employed in the conduct of the company's business.

LAND VALUES

The present value of land owned by the City Gas Company was appraised by a committee composed of Messrs. S. W. Pannill, appointed by Major C. L. Wright, chairman Public Utilities Commission of Norfolk, and R. F. Baldwin, appointed by the City Gas Company.

A copy of the appraisal report is attached hereto as Exhibit "J" and shows the following values:

Land occupied by gas works	$435,000
Land and office building on Plume St.	85,000
Land occupied by present gas holder	5,500
Land to be occupied by new gas holder	7,500
Total	$533,000

In order to develop the net values included in value for rate-making purposes as determined herein, it is necessary to deduct from the above figure of $533,000, the following items:

Appraised value of office building on Plume Street	$29,740
Site occupied by present holder, which was included in the purchase price paid for the property of the National Gas Company of Berkley and included in historical cost	5,500
Total deductions	$35,240

Total net addition to Forstall and Robison's appraisal for land value	$497,760

The original cost of land at the gas works amounted to $2,100, and that on which the office building is located amounted to $7,000. The increment in land values since time of purchase, upon the basis of the present appraised values, is as follows:

Land at gas works	$432,900
Land (exclusive of office building) on Plume Street	48,260
Total increment	$481,160
Land recently purchased for new holder	7,500
Total additions to historical cost on account of land values	$488,660

The following figures are believed to represent fair and just allowances for the items of additional value above named, and the sum thereof will produce a balanced rate base fair and acceptable alike to the city and the company:

Item	
1. Total historical cash investment as of January, 1920	$1,421,690
2. Going concern value, at 15 per cent of Item 1	213,000
3. Increment in land value as determined from appraisal of committee appointed by city and company	488,660
4. Total property value as of Jan. 1, 1920.	$2,123,350
5. Working capital, cash and materials	130,000
6. Average additional investment now being made	130,558
7. Total value for rate base in 1920	$2,383,908
8. Total annual return on Item 7, at 8 per cent	$ 190,696
9. Annual return on Item 7, at 8 per cent, per 1,000 cu. ft. sold	$ 0.346

It will be noted that the base so established in Item 7 by representatives of the city is $1,219,295 less than that which would result from using the basis urged by the company. The fair and just rate for gas in Norfolk, using the basis developed by the city representatives, is therefore found to be made up of the following elements:

	Per 1,000 Cu. Ft. Sold.
Operating expenses and taxes	$1.294
Return on rate base (Item 9 above)	0.346
Total net rate (average) per 1,000 cu. ft.	$1.640

The base rate proposed by the company is $1.60 net. As a result of the above developed figures and the careful and exhaustive study given to the matter, it appears that the new rate schedule filed by the company for its service under the abnormal conditions prevailing, is justified by the facts.

Following an extended conference upon the subject matter hereof on March 18, 1920, at which were present R. W. Peatross, Esq., city solicitor; Major C. L. Wright, chairman of the Public Utilities Commission; A. Merritt Taylor and Charles B. Cooke, Jr., representing the city of Norfolk, and Thomas S. Wheelwright, president; E. Randolph Williams, Esq., general counsel; W. H. Venable, Esq., general attorney, and Messrs. T. Norman Jones, Jr., general manager, and Leake Carraway, representing the City Gas Company, the company agreed to scale down its property values for rate-making purposes upon the basis proposed by the city's representatives, to wit, from $3,342,645 to $2,123,350, as of January 1, 1920, so establishing its values for rate-fixing purposes upon the base of actual historical cash investment, plus allowances for intangibles as above specified. This, the city's representatives regard as a most important concession on the part of the company, involving, as it does, a reduction of $1,219,295 in the appraised value of its property for rate-making purposes. In arriving at the rate base for 1920, additions must be made to this figure for working capital and additions to property in 1920. It will, however, have the effect of removing once and for all the element of inflation of value as a controversial question of the future.

Character of Service Rendered

The measure of quality of service provided by the company consists of the average heating value of the gas produced, the cleanliness of the gas and the pressure maintained at the consumers' meters. In the past few years the service supplied in certain localities has been admittedly deficient in all three respects, as indicated by the character of complaints made. This deficiency, which was not peculiar to Norfolk during the war period, may possibly be attributed in large part to conditions prevailing in the war period which have affected the quality of gas-making materials obtainable by the company. This, in conjunction with the sudden increase in the demand on the company for service, arising from the abnormal increase in population occurring in Norfolk since 1917, has adversely affected the heat contents, physical purity, and also the pressure of the gas in certain districts due to the clogging of mains and laterals with tar and oily substances, the effect of which would be to throttle down service pressures through restricted pipe areas.

Investigation has shown that the company has been working steadily for the past year blowing and cleaning out mains, and since 1917 has laid approximately 32,000 ft. of additional main and lateral, exclusive of lengths replacing former mains with pipe of larger size. The company's expressed intention is to clean up the entire distribution system, and conditions in such districts as may now be suffering from deficient pressure are expected to improve steadily and rapidly. The low heat value of gas, about which complaints have been made in the past, has apparently been corrected as indicated by recent monthly records of analysis made twice daily at the plant. These show an average heat maintained of approximately 580 B.t.u. Standards in many States and cities vary between 550 and 600 B.t.u., so that at the present time Norfolk gas compares favorably with average heat standards in other localities.

While the company's plant presents a dirty and rundown appearance, conclusions as to adequacy and efficiency of gas apparatus cannot be drawn from such

superficial factors. The records show that during the years 1914 to 1916 gas oil consumption averaged 3.5 gallons of oil per 1,000 cu. ft. of gas, this figure rising to an average of 4.5 gallons in the war years, 1917 and 1918. For the past year, oil consumption averaged 3.28 gallons per 1,000 cu. ft., which compares favorably with the typical consumption of 3.5 gallons in plants of this size and character. Coke consumption is also normal. There are, of course, apparent opportunities for improvement, and the company states that plans are now under way to install additional and improved equipment, both in the plant and distribution system. Exhibit "H" shows the character and cost of equipment added in the nineteen months ended January 31, 1920, and the amounts definitely authorized for additions in 1920, or a total for the period of thirty months, of $491,565.42.

Past Earnings of the Gas Company

The net income of the City Gas Company by years from 1897 to 1919, inclusive, after operating expenses and taxes, but before payment of bond interest and stock dividends, is shown on Exhibit "G," attached hereto, upon the basis of total amounts and per cent of actual cash investment for the year in question. The amounts paid out by the company in the form of bond interest and stock dividends are also shown by years, these amounts varying between 2.3 and 13.2 per cent during the 24-year period, and averaging 5.98 per cent for that period, showing that no excessive amounts have been withdrawn from the business as interest and dividends. The average figure of 5.98 per cent is based on average cash investment, without any allowance for increment in land values and going concern value, which, if included, would reduce the percentage withdrawn as bond interest and dividends. Practically all surplus earnings above the modest disbursements which have been made as interest and dividends, have been reinvested in extending and improving property devoted to service of gas consumers, and not removed from Norfolk in the shape of excessive dividends on the company's stock.

Future Policy of City Gas Company

The president of the gas company has assured the Public Utilities Commission that:

The surplus earnings of the gas company over and above interest and dividend payments will not be diverted from Norfolk for the benefit of other communities served by the Virginia Railway & Power Company.

The quality and pressure of gas will be maintained according to a standard, which will assure satisfactory and efficient service, to be fixed by the State Corporation Commission.

Recommendations

In conclusion, I make the following recommendations:

1. That the Public Utilities Commission of the City of Norfolk approve the findings of this report, and adopt the policy outlined therein.

2. Submit this report to the City Council of the city of Norfolk for consideration.

3. That the City Council of Norfolk approve the findings of this report and the policy outlined therein on behalf of the city.

4. That the City Council and the Public Utilities Commission instruct Major C. L. Wright, chairman of this commission; R. W. Peatross, Esq., city solicitor, and A. Merritt Taylor, to present this report to the State Corporation Commission and represent the interests of the city of Norfolk at the forthcoming hearing.

Respectfully submitted,

(Signed) A. M. Taylor,

Some interesting reasoning on rate making was brought out in the examination of the city's engineers at the State Regulatory Commission hearing.

The following is from the testimony of Charles B. Cooke, Jr.:

Basis of Valuation for Rate Making

Q.—Why did you decline to accept the company's appraisal of this property for rate-making purposes?

A.—Because it was based upon war-time prices which are unlikely to be fairly representative of probable normal conditions prevailing in the post-war period. While present-day prices supply an excellent starting point for estimating the probable future level of value for rate-making purposes, I believe that if they were used in this case without modification as a basis for rates, these would be unduly inflated and not commercially expedient at this time. If we knew positively that present-day prices would prevail for a number of years to come, then without question they would constitute a proper basis of value for fixing rates. There must be direct co-ordination of valuation of capital for rate fixing, the returns allowed on that capital valuation and the general scale of capital and operating costs encountered by the utility company during the period in which its service rates are to apply. Those who have estimated the probable post-war normal price levels, including Government agencies, have generally concluded that they will probably settle down to a level about midway between pre-war prices and war-time prices. As it is obviously impossible to predict accurately what the post-war price levels will be, we adopted the historical cost as a basis which could not be subject to any reasonable question in the case under consideration.

Increment in Land Value Allowed in Valuation for Rate Making

Q.—Why did you include the increment in land value in arriving at the rate base?

A.—Because we are advised by the city attorney that the company is lawfully entitled, under a reported decision of the Supreme Court, to have included in its rate base the increment in land value, and because we recognize that the company is justly entitled to so include it, for if the increment in land value were not so included in the company's property value, the city would be discriminating between its public utility companies and other private and corporate enterprises in the city who enjoy increment in the value of land owned by them. The only way in which the public utility company can be allowed the benefit of the increment in land value to which it is entitled is through the medium of its service rates. If the company were denied the increment, the net effect would be to deprive it of benefits enjoyed by other property owners in the city.

Q.—Why is the company entitled to have going concern value included in its rate base?

A.—Any constructive enterprise built up over a period of years acquires an intangible element of value over and above its actual cash investment through the application of human initiative in the development of its plant and business. It must be apparent to everyone that a property operated as a going business clearly and logically has a value in excess of the actual investment in that property upon which the owner is entitled to a just return. In our opinion 15 per cent of the historical cost is a reasonable allowance for going concern value in this instance.

DEPRECIATION NOT REGARDED AS A FACTOR

Q.—To what extent, if any, have you allowed for depreciation?

A.—We have made no allowance for depreciation either in fixing the value of the company's property or as an element of operating expenses. The estimated operating expenses include only allowance for normal current maintenance charges sufficient to maintain the property in 100 per cent service condition, exclusive of accumulated deficiencies which the company should be required to make up out of its normal return and should not be allowed to collect from the gas consumer. We believe that the company is required to maintain its physical property at 100 per cent service value. If for any reason the owners of the property have in the past withdrawn as dividends or diverted to capital account amounts which should have been applied to maintaining the property at 100 per cent service value, we believe that the practical and sound way to correct such a condition is to require the company to bring its property back to 100 per cent service condition out of its future earnings without increasing its rates for this purpose. In the present case we believe that the company has allowed its property to fall somewhat below 100 per cent service value. In so doing the company has not withdrawn past earnings from the property as interest and dividends, in excessive amounts, but has used its accumulated surplus in extending and developing its property. In other words, instead of applying the needed part of such accumulated surplus to maintaining the property that was there fully up to 100 per cent service value, it apparently has applied the part of its surplus needed for this purpose to extending its property. To establish a rate which would offset that theoretical depreciation, possibly amounting to from 20 to 25 per cent, which takes place before a new property settles down to its normal operating condition in which it must be currently maintained to give 100 per cent service value would be to increase the rate to the consumer by an amount representing annual depreciation. Theoretically the depreciation fund so collected would either be kept intact in cash form or reinvested in the property to take care of renewals above ordinary current maintenance. It makes no difference in the rate whether the amount on which 8 per cent is allowed is made up of 100 per cent physical plant value or, say, 75 per cent physical plant value plus 25 per cent of that value representing theoretical accrued depreciation.

Is Lime a Belt Treatment?

A practice that should be discouraged among belt men is the usage of lime on oily belts. It is thought by some belt men that nothing is equal to lime for absorbing the oil and rendering the belt fit to do its work. Under oily conditions, however, almost any dry powder will make a belt pull better—anything that will absorb the oil. A non-corrosive powder, however, should rather be used, such as chalk or fuller's earth. But, better still, don't use any powder at all. It harms, rather than benefits, a belt.

In emergencies it is often considered good practice to "do anything in order to get out the work," but that does not imply that we should keep on doing it year after year. If oil continues to spatter on the belt the belt man is bound to have more or less trouble right along, and he must keep on using this harmful expedient. Naturally, the belt won't last long under such severe conditions. The best treatment for an oily belt is to stop the oil spattering first and then keep the belt in good pliable condition. I know of no circumstances where oil throwing cannot be stopped. After that is done I would wash the belt clean of the oil and then fill it full of the best belt treatment obtainable. Do not use castor oil, neatsfoot oil, boiled linseed oil, etc. Use a treatment that is made specially for belts by a responsible manufacturer.

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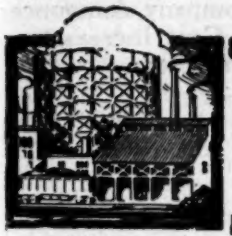
Accumulation of Industrial Business Has Effect in Complicating Coal Supply Problem of British Gas Companies

(*Continued from page 282.*)

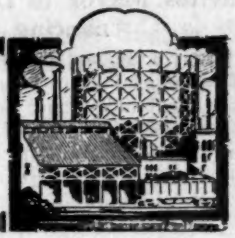
of course is not for the writer to say. The problem is one that has to be taken up locally as its feasibility depends entirely upon the quantities of sawdust that are available and the cost of its collection.

THE WAR DISABLED

The European gas industry, of course, has also had its share of war-crippled and partially disabled. Being one of the semi-engineering industries it had to give a large percentage of its men to the engineering corps on all sides, and it has paid the price along with all the other industrial branches of Europe. During the reconstruction period attempts have been made to re-employ as many of the former men as possible and most have found their places open again. But the employment of the partially disabled has not been always easy. Where office work could be found for those that were able to do it, office places have been reserved. The gas industry also has found many a place for a semi-disabled man as an inspector in the commercial department, and many of the collector places have been thrown open to them. On the other hand, much hardship has come to those that have been employed before the war in the general equipment work. General equipment work requires men of high skill and in the full possession of all their abilities. Great versatility, perfect eyesight and the full possession of the sense of smell are especially required to equip a man for this kind of work. It is the impairment of the smelling ability which has now forced many former soldiers out of their employment in the gas companies. Many of the men have come home with failing sense of smell. Their eyesight is perfect and their other abilities are normal, but their smell is gone. Heavy colds, nervous exhaustion, shell shock and similar causes are said to have contributed to this condition. The men no doubt are unfit for equipment work in the employment of gas companies, and a recent investigation has led to the discharge of many affected equipment men in Germany. And the situation is by no means confined to Germany.



NEWS OF THE GAS INDUSTRY



City Will Fight Increase in Rates Granted Brooklyn Borough Gas Co.

Assistant Corporation Counsel J. P. O'Brien has declared that Public Service Commissioner Nixon has no right to raise the gas rates of the Brooklyn Gas Company, Brooklyn, N. Y., from $1.10 to to $1.15 a 1,000 cu. ft., and that in rendering the decision affecting the rates Mr. Nixon ignored a decision of the Court of Appeals, which was concurred in by Charles E. Hughes, who acted as referee two years ago.

"Of course, the decision of Commissioner Nixon will not stand," said the Assistant Corporation Counsel,

"When Referee Hughes, acting in the Brooklyn Borough Gas case two years ago, declared that the Eighty Cent Gas law was confiscatory as applied to the Coney Island and Sheepshead Bay area, he at the same time agreed that the Public Service Commission didn't have the power to raise a gas rate or an electric rate, even though that rate was held and proven to be confiscatory.

"The power to decide that question, the Court of Appeals has decreed, rests in the courts. When Referee Hughes said the Public Service Commission was powerless he was echoing the sentiments of the Court of Appeals.

"In the face of all this, Commissioner Nixon announces that he has fixed the rate of the Brooklyn Borough Company at $1.15. The city will, of course, fight Mr. Nixon's order."

Asked the present status of the city's fight against the Hughes decision on the Eighty Cent Gas law, Mr. O'Brien said the case is still in court on appeal by the city.

THE BOSTON CONSOLIDATED GAS COMPANY'S output for March was 621,032,000 cu. ft., an increase of 12.4 per cent compared with sales for the corresponding 1919 month. The high cost of coal is increasing the fuel use of gas.

Buffalo to Have Demonstrations in Conservation of Natural Gas in Cooking

In connection with the convention of the Natural Gas Association of America, which is to be held in Buffalo, N. Y., May 17-20, inclusive, an exhibit of effective cooking appliances will be in charge of Miss Olga A. Elifritz, special demonstrator of natural gas conservation, of the U. S. Bureau of Mines, this exhibit having been approved by Director Van. H. Manning, of the Bureau of Mines.

Beginning the middle of April and continuing up to the time of the Natural Gas Exposition, Miss Elifritz will be in Buffalo conducting actual cooking demonstrations, assisted by Miss Mildred L. Sipp, Department of Home Making, State Normal School, Buffalo, N. Y. These demonstrations and lectures cannot fail to enlist the active interest of the women of the city in the solution of natural gas problems, and will aid greatly in adjusting the difficulties to be met through the mixing of manufactured and natural gas in Buffalo.

Gas Oil Shortage Increasing

The increasing shortage of oil used in the manufacture of gas and the inability of the gas companies of the United States to secure satisfactory assurance of steady supply has created a serious condition, according to General Manager C. E. Paige, of the Worcester Gas Light Company, Worcester, Mass. He bases this statement on information just received from the American Gas Association, which states that the co-operation has been requested of the various State public utility commissions, the Federal Bureau of Mines and the United States Geological Survey, in taking measures to alleviate the threatened shortage, which constitutes a real menace.

The continually increasing demand for gasoline and the refined products for crude oil and the great extent to which fuel oil has come to be used in place of coal for steamships, have much to do with the present shortage of the so-called gas oil.

"Gas companies are already exercising the greatest economy in their use of gas oil. Its consumption has been reduced as far as possible without lowering the standards of service which they are required to operate. A partial solution lies in the adoption of a reasonable heating value standard, and the abolition of the wasteful and antiquated candle-power standards."

Oil Gas Process Company Incorporated

Announcement has been made that the Oil Gas Process Company has acquired the gas apparatus and process patents of L. P. Lowe, E. C. Jones and L. B. Jones, embodying the latest and best methods of making gas from oil.

Gas Associations to Hold Joint Meeting

The New Jersey State Gas Association and the Pennsylvania Gas Association will hold a joint two-day meeting on April 13 and 14, 1920, at Hotel Adelphia, Philadelphia, Pa.

Many interesting features have been arranged, including the annual dinner and dance at the Adelphia Roof Garden, an inspection of the Rainey-Wood Coke Plant at West Conshohocken, Pa., trapshooting and a baseball game.

A large attendance is expected.

Southern Counties Gas Co. Resumes Industrial Service

Through the acquisition of new supplies from wells in the Placentia-Richfield section, the Southern Counties Gas Company, Santa Ana, Cal., now is preparing to resume service to the industrials in Orange County from which the supply was cut off recently because of a shortage in the amount available to the company, according to an announcement made by J. C. Hayden, district superintendent of the company.

Invites Mayor to Do the Financing

"Mayor Hylan and the members of his official family know full well how the builders and new residents of the territory served by this company can get gas," declared Ralph Elsman, vice-president of the Kings County Lighting Company, Brooklyn, in discussing the hearing before Mayor Hylan, of New York, in which that official was quoted as saying that if necessary he would seek to have a law passed which would compel the company to give service.

"If those members of the municipal government who are familiar with the situation of this company will go on record it will be clearly evidenced that we are unable to manufacture and distribute gas at eighty cents since it has cost the company more than this amount to manufacture it without any return on any capital in the years of 1918, 1919 and even more in 1920. There is no law-making body in the world that could compel or would compel any company to sell its manufactured product below cost, and that is just exactly what is demanded of us. We cannot raise funds to make the necessary additions and extensions to our plant at the eighty-cent rate, and that means that we cannot add new consumers to a plant that is already overtaxed in its manufacturing capacity.

"There is no oath of office that requires any official to force or attempt to force or coerce a public utility into becoming a charitable institution. We have asked justice and now we demand that justice. It is for the proper officials to lay aside their political ambitions and to meet us squarely and fairly in rendering service to the people. The people are the ones who are vitally affected. They are the ones who must be considered and no one must be allowed to distort or conceal the vital facts.

"If Mayor Hylan or members of his official family can raise from $1,000,000 to $2,000,000 for additions and extensions to the plant of this company at the eighty-cent gas rate there is no need for us to go to court to obtain justice, and if he can interest the people to invest their money in a public utility which can assure no return upon such capital at the rate they are compelled to sell their product he should be considered the world's greatest financier.

"In turbulent times such as these, when there is need for co-operative action on the part of regulatory bodies, the company and the community, politicians should lay aside their political ambitions and work shoulder to shoulder for the people to see that the public utility is kept healthy and strong in order to keep abreast of the growth of the community as one cannot grow without the other and be successful.

"The situation has gone beyond where a long drawn out fight in the courts will be of any remedy or help. On the contrary this is an actual physical condition that confronts us and one which wordy mouthings will not remedy. I have done everything in my power to give the community the service which it demands, but when our income is less than our costs, I can go no further."

Dallas Gas Supply Good for Decade

Natural gas available to Dallas and other North Texas cities reaches a total of 200,400,000,000 cu. ft. in quantity and is good for six to ten years, according to a report from John Barton Payne, Secretary of the Interior. His assertion was based on the report E. W. Shaw and P. L. Ports, Government geologist and engineer, respectively, made in North Texas during the winter.

Elimination of waste and extensive development would be required to prevent future shortage. A detailed report showing the scope of the survey and the basis of estimations is expected soon.

"Geological survey report by Shaw and Ports indicates gas available to Dallas and other cities in central and North Texas as follows:

"Petrolia Field, 10,000,000,000; Fox Field, 4,000,000,000; Walters Field, 13,000,000,000; Loco Field, 400,000,000; Mineral Wells, 23,000,000,000; Eastland-Ranger, 150,000,000,000; estimated future annual demand, 23,500,000,000.

"The geological conditions suggest the possibility of an extension of the old fields, the existence of undiscovered pools, but many months will be necessary to find and develop them."

Holland Oil & Gas Company, Davidson County, Tenn., capital stock, $40,000. Incorporators, Foster M. Wiles, F. M. Nevins, Robert W. Thompson, Frank C. Allison, Alson W. Wilson.

Taunton Company Announces 15 Per Cent Increase in Rates

Notice is being given by the Taunton Gas Light Company, Taunton, Mass., of an increase in the price of gas, on and after April 1, of 15 cents per 1,000 ft. It is an increase that many had foreseen for a long time, because of the steadily growing cost of the two essentials that, more than others, enter into the making of gas; namely, coal and oil. The company has delayed as long as possible, making the rates to consumers higher, and gives assurance that, as soon as conditions shall make it possible, a reduction to old rates will be put in force. The announcement is made in the following notice issued from the office of the company:

"To Our Customers.—Because of the recent increase in the cost of coal and oil, two of the main items in the cost of manufacturing gas, we are obliged to advance the price 15 cents per 1,000 ft. on gas sold on and after April 1, 1920.

"We regret that it is necessary to take this course, and assure our customers that it is our intention to restore the old rates as soon as the cost of manufacture and distribution of gas will safely permit.

"Taunton Gas Light Co.
"Walter T. Soper, Treas."

Boston Consolidated Wants to Buy Its Gas at 50 Cents

A petition has been filed with the Department of Public Utilities by the Boston Consolidated Gas Company, Boston, Mass., for authority to enter into a new contract with the New England Fuel & Transportation Company for the purchase of gas at the rate of 50 cents per 1,000 cu. ft. The last contract between the two companies called for a price of 29 cents. Some time ago the companies asked permission to increase the amount to 35 cents, but permission was refused. The gas company declares that the rate of 50 cents is less than it would cost the company to make its own gas in a suitable plant.

Three Gas Companies Ask New Stock Issue Permit

The East Boston (Mass.) Gas Company has petitioned the Department of Public Utilities for permission to issue $425,000 of new capital stock at $25 a share. The Newton

& Watertown (Mass.) Gas Light Company has requested the approval of an issue of new stock to the amount of $650,000 at $100 a share. The Citizens' Gas Light Company, of Quincy, has petitioned for an increase in capitalization of $175,000, the stock to be sold at $100.

In each of the foregoing cases the price of the stock would represent its par value. Proceeds in each instance would be used in paying for additions and improvements to the plants.

The Boston Consolidated, the East Boston, the Newton & Watertown and the Citizens of Quincy are controlled by the holding company known as the Massachusetts Gas Companies.

City to Buy Gas Plant

Following action of the city council of Omaha, Neb., in virtually voting to purchase the gas plant, the water board has adopted a resolution asking for $1,000,000 in addition to the gas plant purchase price of $4,500,000, to be used as working capital and to cover cost of extensions necessary when the plant is taken over. The resolution was presented to the mayor by R. B. Howell, chairman of the metropolitan water board, who said that at the purchase price it will be impossible for the city to furnish $1 gas, and that the price may even go to $1.30.

Commissioner W. G. Ure said that in addition to the bond issue for the purchase price and the million-dollar bond issue asked by the water board, an additional bond issue of $2,000,000 probably will be necessary for remodeling the gas plant.

Present cost of operation he placed at about $1,000,000 a year, and he predicts that rising costs of materials used in gas production will boost this figure right from the start.

Whether the plant is operated by the gas company or by the city, however, higher gas rates are bound to ensue.

Should the city take over the plant at its present valuation, there must be paid every year $81,000 for thirty-three years to wipe out the $1,250,000 excess value which is allowed by the appraisement.

ROARING RIVER OIL & GAS COMPANY, Davidson County, Tenn., capital stock, $50,000. Incorporators: W. J. Matthews, W. H. Hyde, John W. Moore, Charles B. Rogan and Paul H. Snapp.

N. Y. Consolidated Points Out One Way of Increasing Summer Load

The Consolidated Gas Company, of New York, is going after summer load business as indicated in the reproduction of one of their advertisements run in the New York papers.

The suggestions made here can be profitably used by all gas companies.

Gas Company to Supply Oil for Streets

Oil to be used in laying the dust on city streets this summer will be supplied by the New Haven Gas Light Company, New Haven, Conn., which has been given the contract for supplying 200,000 gallons, more or less, of tar road oil at nine cents a gallon.

What We Do for the Hotel Royalton

DURING THE SUMMER MONTHS

WE ARE READY TO DO FOR OTHER LARGE

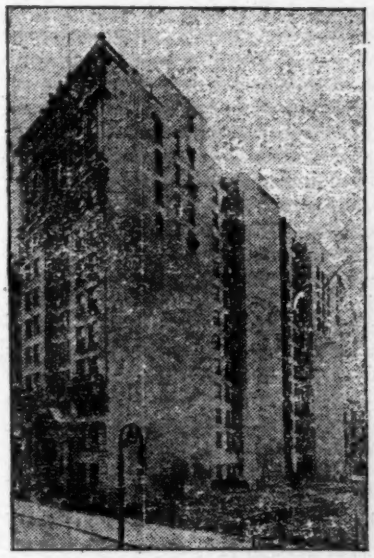
Hotels, Factories, Loft or Office Buildings

The question of a constant and ample Hot Water Supply must be considered by every Landlord or Owner of buildings.

The Hotel Royalton extends through from Forty-third to Forty-fourth streets, and is the best known Bachelor Hotel in New York City. Twelve stories in height, the Royalton has 100 Baths, 150 Wash-basins, 24 Slop Sinks and 2 Kitchen Sinks.

5,737 GALLONS OF HOT WATER

Is the Average Daily Maximum Used. Every Drop Produced by a



HOTEL ROYALTON, No. 44 West 44th Street

GAS FIRED STEAM BOILER

DETAILED FIGURES OF HOT WATER SUPPLIED AND COST

FIGURES FOR THE MAXIMUM DAY		FIGURES FOR A COMPLETE WEEK		FIGURES FOR THE MAXIMUM HOUR	
Hot water used per day	5,737.5 gal.	Hot water used per week	37,552 gal.	Maximum hourly demand	577 gal.
Gas consumption	8,800 cu. ft.	Gas consumption	63,250 cu. ft.	Gas consumption	600 cu. ft.
No. of degrees water heated	94° F.	No. of degrees water heated	90° F.	No. of degrees water heated	88° F.
Temp. of water delivered	166° F.	Temp. of water delivered	161° F.	Temp. of water delivered	165° F.
Cost of gas per day	$7.04	Cost of gas per week	$50.60	Cost of gas	$0.48
Cu. ft. gas per gal. water	1.53	Cu. ft. gas per gal. water	1.68	Cu. ft. gas per gal. water	1.04
Gallons of water for 1 cent	8⅓	Gallons of water for 1 cent	7⅛	Gallons of water for 1 cent	12

ASK TO HAVE ONE OF OUR REPRESENTATIVES CALL

Consolidated Gas Company of New York

GEO. B. CORTELYOU, President

ADVERTISEMENT APPEARING IN NEW YORK DAILY PAPERS

Putting It Up to the Public

(*Continued from page* 284.)

"So far," encouraged the Old Man, "your reasoning seems fairly sound but you still seem to be a long way from where you started out to go."

"What I was coming at is this," Peterson continued, getting down to the point. "When our board of directors or our officers have any question to solve they have before them all the information needed to solve that problem. If they did not have, they most certainly wouldn't make very wise decisions every time. Now, what I'm getting at is this. We are expecting the public to make wise decisions without having any information at all about the problems that the public has really got to solve."

"I don't believe I quite understand you," and the Old Man looked rather doubtfully at Peterson. He was beginning to believe that Peterson was inclined to let his ideas run away with him. "The representatives of the public have just as much information about us as the representatives of the stockholders, the officers and directors have when they have to make any important decisions. I don't see why the public should have any more information about the business than the stockholders have."

"Perhaps they shouldn't," agreed Peterson, "but I'm inclined to think that it would be better if we gave our stockholders more information in regard to what we are doing. But the public is different in a way from our stockholders. It has more complete control over our fortunes than do the stockholders. Our board of directors may vote to do something and then the public may prevent us doing it. No one can hold any sort of a political job unless he can win the votes of the voters. I'm inclined to believe that public service commissioners sometimes have to render decisions that are against their good judgment. They do this because they fear the result of weakened political support if they do follow the dictates of their own best judgment.

"You see there is a good deal of difference between the attitude of our stockholders and that of the general public. The stockholders are interested in making as much money as possible. As long as the dividends are good they are satisfied. The public, on the other hand, is interested only in how cheaply they can get gas. It's in a position to force us to supply gas at the lowest possible rates. In fact, it's in a position to force us to supply it at less than cost if we can judge by the experience of the traction companies.

"Now, what I'm getting at is this. People are now expecting a decrease rather than an increase in rates. They've looked upon the increase as merely a war measure. If this oil situation keeps up we'll have to increase our rates to meet expenses. If by any chance we are able to keep them down we're not likely to get any credit for doing so unless we tell the public something about our problems. If we don't explain things I don't see how we can expect really fair treatment from the public."

"What do you want to do about it?" inquired the Old Man.

"I have been thinking that the best thing to do now is to begin to tell people something about the way gas is made and the importance of having a supply of cheap gas oil in order to sell gas as cheaply as we are selling it now. I think that the way to prepare the people for an increase in rates that may be necessary because of the oil and the coal situation is to begin to tell them about our needs now.

"I understand that there are certain companies in the country that have the public working for them rather than against them and that they have been able to bring this about by teaching the public a lot about the gas business. If this is the case it seems to me that it is time for us to do some work along this line before conditions become any worse than they are. The way I look at it, the public is a sort of silent partner in our business, and is able to help us keep going or to put us out of business altogether."

"Just how do you want to do this teaching?" queried the Old Man.

"There isn't much we can do at the present time except use the newspapers and to prepare a booklet on the activities of the company, what it has done to keep down the price of gas and to keep up the service. Such a booklet could be prepared at no great cost and I'm sure that it would help us a whole lot with our customers.

"Next winter I would like to plan for a course of public lectures on gas making. We might give them here in our own building; we might hire a hall outside, but better than all, if it can be arranged, would be to hold them in one of the schoolhouses. I believe that it would pay us to give a regular course on gas making in our high school. It wouldn't cost us very much; it would make the courses in the school more practical and it would help save the city money. I believe that one way to make the teaching in our schools more practical and the teachers more respected is for all the large concerns to volunteer part-time service of their engineers, chemists, etc., as instructors. Each man could conduct a course or two without being obliged to devote a great deal of time to it. These courses would be practical. They would bring the companies into closer touch with the public and, in addition, they would make it easier to find just the sort of young people we need to train into future executives. I believe now that we have come to a point where we have got to do more teaching, and less preaching; we have got to do more showing and less asking."

News of the Canadian Gas Association

The thirteenth annual convention of the Canadian Gas Association will be held in Ottawa, the capital city of Canada, Friday and Saturday, August 27 and 28, 1920.

A cordial invitation is extended to all gas men. Hotel reservations can be arranged through the secretary, G. W. Allen, 19 Toronto Street, Toronto, Ontario, Canada, who will also supply full information on application.

Pittsburgh Will Substitute Artificial Gas to Supply Deficiency

In the near future artificial gas for heating purposes will be substituted largely for natural gas in the Pittsburgh and other districts, where a considerable shortage in the supply of natural gas has developed.

This was the prediction made at a conference held recently under the auspices of the Public Service Commission in Pittsburgh, Pa. The Philadelphia company, which has been a large supplier of natural gas for many years, it is stated, is now prepared to supply 7,000,000 cu. ft. of artificial gas a day, and expects in the near future to be able to supply 30,000,000 cu. ft. of artificial gas a day.

Construction Notes

Plan to Construct Gas Producer Plant

Because the natural gas supply is giving out in the region of Buckhannon, W. Va., the Equitable Window Glass Company will probably be forced to move its plant from Buckhannon. In an effort to keep the plant there, a campaign has been started to raise $110,000 for construction of a gas producer plant.

Salem Company to Erect New Retorts

Extensive improvements are being made at the Salem, N. J., gas plant, which will mean the remodeling of three of the benches and the insurance of an adequate supply of gas for the use of the community. Repairs will be made to only one bench of retort at a time. New retorts will be erected and as soon as one bench is finished another will be repaired until the plant is completed.

This work will, it is believed, take fully ten days. During that time the public will be called upon to economize in the use of gas so that the whole community can be served in an impartial manner. While one bench is being repaired the plant will necessarily be curtailed in its gas-making capacity. It is proposed by the officials of the company to have an extra force of experts from Newark to do the work, and the public is assured that it will be pushed as rapidly as possible.

While the plant consists of four benches, one of them is comparatively new, so that it is only necessary to repair three. The consumption of gas last winter exceeded all former records and it is not expected that there will be any let-up except the usual falling off during certain months. Should the Anthracite miners receive a substantial advance in wages the increase will, of course, be passed on to the consumer, and that will mean another big advance in the price of coal. In that case there is every reason to believe that the consumption of gas for cooking and heating purposes will be materially increased. But with the improvements about to be made the company has no doubts about being able to meet the demand.

Extensive Improvements to Norfolk Gas Plant Authorized

The State Corporation Commission of Virginia has authorized the following improvements to the plant of the City Gas Company, of Norfolk, Va.

One additional new 11-ft. machine, automatic control and automatic control for last year's machine; the remodeling, moving and resetting of the present 9-ft. machine; the installation of a new 100,000 cu. ft. compressor; oil circulating water and boiler feed pumps; the laying of new mains through the yards of increased diameter; a new district holder and several miles of distribution main, both high and low pressure, 4 to 12 inch.

After completion of this work, Norfolk will have a strictly up-to-date water gas plant of approximately 9,000,000 cu. ft. daily capacity.

Pacific Power & Light Company Extending Its Main System

In the near future the Pacific Power & Light Company, Walla Walla, Wash., will start laying a lot of 4-in. and 2-in. gas mains in different sections of the city to put the system in the most efficient condition possible. About $20,000 in labor and material will be expended in this work. This improvement has been held up on account of the war and inability to secure materials.

Charles S. Walters, manager of the power company, stated that when this work is completed Walla Walla would probably have one of the best gas distribution systems in the northwest.

In addition to the laying of these mains, additional apparatus is to be installed at the gas works, this work also having been delayed through inability to get delivery of apparatus.

Midway Gas Co. Needs Money to Extend Pipe Lines

Permission to issue serial notes aggregating $750,000 was asked of the railroad commission by the Midway Gas Company, Bakersfield, Cal. The notes are to be endorsed by the Southern California Gas Company, one of the Midway's largest consumers, and the proceeds to be used largely to construct about 60 miles of pipe line to carry natural gas to meet the demands of the Southern California Gas Company.

San Diego Oil Companies Consolidate

A consolidation of the largest oil companies now operating in San Diego, Cal., for the purpose of completely developing this section, has been agreed to by the board of directors of the Pacific Oil & Gas Company, capitalized at $2,000,000, and by Mayor L. J. Wilde for the Community Oil Well. The tentative agreement has already been ratified by the directors of the Pacific company.

Acting on the advice of B. B. Dudley, E. R. Dudley and David Gwynne, three well-known oil development men connected with the Pacific company, the other directors of that company have voted to consolidate with the Community project and explore San Diego County widely and thoroughly for oil.

The men representing the Pacific Oil & Gas Company are F. Giannini, president; G. Beccuti, treasurer; B. B. Dudley, director of field operations; W. U. Baskett, manager of Baskett & Co., fiscal agents for the Pacific company; David Gwynne, secretary, and Sanford Sobey, San Diego man, who is field representative in this county.

The Pacific company is engaged in "bringing in" an oil field in the Lake Tulare country. The San Diego field is looked upon by the directors of the company as a new but very favorable prospect.

English Gas Expert Inspects Plants in United States

G. M. Gill, chief engineer of the South Metropolitan Gas Company, of London, is in Rochester, N. Y., inspecting the plant of the Rochester Gas & Electric Corporation which he says is the latest development of its kind to be found anywhere. Mr. Gill has already visited plants in New York, Boston, Springfield and Philadelphia, and expects to visit others in Buffalo, Detroit, Chicago, Milwaukee and St. Louis before returning to England.

Increased Rates for Wauseon, Ohio

An increase in gas rates from $1.25 to $2 a 1,000 ft. was granted by council for one year to the Ohio Gas Light & Coke Company, Wauseon, Ohio.

Petersburg Gas Company Is Granted Increased Rate

The State Corporation Commission, at a meeting held in Richmond, Va., granted the increase in rates asked for by the Petersburg Gas Company, Petersburg, Va.

An investigation of the service rendered by the company will be made by the commission at an early date, however, and if it is found that the increase now granted was not warranted, the patrons of the gas company will be reimbursed the difference between the old rate and that now to go into effect.

Heretofore the minimum rate for 400 cu. ft. or less has been 50 cents, but the company will increase this 50 per cent, making the minimum bill for the month at 75 cents.

The rate for 5,000 cu. ft. up to 100,000 has been $1.15 and all over 100,000 cu. ft. $1.10, but a sliding scale will be put into effect which is as follows:

Minimum 400 cu. ft. or less, 75 cents net; first 5,000 cu. ft., $1.60 net; next 5,000 cu. ft., $1.50 net; next 10,000 cu. ft., $1.40 net; next 30,000 cu. ft., $1.30 net; next 50,000 cu. ft., $1.25 net; all over 100,000 cu. ft., $1.10 net.

The commission, in granting the increase, stated:

"We are assured that the company at the present time is undertaking considerable improvements in its equipment which will produce a better service and all things considered, it appears that the company is warranted in asking for an increase in its rates."

Removal Notices

The Precision Instrument Company, formerly of Detroit, Mich., announce the removal of their office to 21 Halsey Street, Newark, N. J., where their plant is also located.

The Sargent Steam Meter Company, Chicago, Ill., announce that they have sold their patents and the right to manufacture the Sargent Automatic Gas Calorimeter to the Precision Scientific Company, 820 S. Tripp Avenue, Chicago, Ill.

The local office of the Beverly Gas & Electric Company, Beverly, Mass., will shortly be moved from its present location in the Perry Block to new quarters in the Ryan Block. The new quarters will be newly painted and fixed up to meet the needs of the gas company, and when completed will make a model office. It will also give additional room, which was greatly needed.

Young Bros. Company, Detroit, Mich., announce the removal of their office to their new plant, 666 Mack Avenue, Detroit, Mich.

Twin Cities Gas Co. Brings In Deep Gas Well

One of the best gas wells to be drilled by the Twin Cities Gas Company, Strong City, Kan., was brought in on the Jesse Starkey farm, southeast of Elmdale, when the field was extended nearly a mile south. A good flow of gas was encountered at a depth of 4,000 ft., making it the deepest gas well in the field. The Twin Cities Gas Company supplies Cottonwood Falls and Strong City with gas from their Elmdale field.

Long Island Gas Companies File New Rate Schedule

The Sea Cliff and Glen Cove Gas Company has filed with the Public Service Commission, Second District, a new schedule proposed as effective on May 1 in Glen Cove, Sea Cliff and the town of Oyster Bay, which will establish new block rates per 1,000 cu. ft. for gas for light, fuel and power as follows:

First 10,000 cu. ft., $2 per 1,000 cu. ft.; next 5,000 cu. ft., $1.75 per 1,000 cu. ft.; next 35,000 cu. ft., $1.50 per 1,000 cu. ft.; above 50,000 cu. ft., $1.40 per 1,000 cu. ft.

The minimum charge will be increased from 60 cents to $1 a month. The company also proposes to amend its service regulations by requiring consumers to pay the expense of furnishing and laying pipe from the street line to building. The existing requirement is that a consumer pay for arc extension from the main beyond 50 ft. inside the property line.

Traverse City Ends Gas Controversy

Definitely settling the gas controversy, started by the Producing Company when it asked a raise from $1.25 to $1.60, to bring in sufficient return to warrant investing $50,000 more to enlarge the plant, the city commission of Traverse City, Mich., has decided to hire an engineer to ascertain the exact amount of money invested in the plant and to set a rate. The matter will then be presented to the electors at a special election in April, and if the rate-raising ordinance passes it will hold good until January, 1921. If the measure is killed the problem will be up to the Michigan Public Utilities Commission.

Ordered to Supply Gas

The Arkansas Corporation Commission has ordered the Clear Creek Oil & Gas Company, Fort Smith, Ark., to supply the Southwestern General Gas Company, Fort Smith, Ark., from its surplus gas, if any, if the Southwestern company should have an insufficient amount to supply the Fort Smith Light & Traction Company, according to contract.

This order was issued by the commission after a petition asking the Clear Creek company to supply the Southwestern company gas in cases of emergency had been heard by the commission.

Personal Notes

PAUL M. BOGART has recently been elected president of the Indiana Coke & Gas Company, Terre Haute, Ind. Mr. Bogart was graduated from Williams College in 1899 and has been actively engaged in the gas business for many years.

CHARLES W. GREEN has been elected vice-president and assistant treasurer of the recently reorganized Kansas City Gas Company. Mr. Green is president of the First State Bank and the Packers' Bank of Kansas City and former mayor in 1913. He will hold an important position in the company, being virtually general manager.

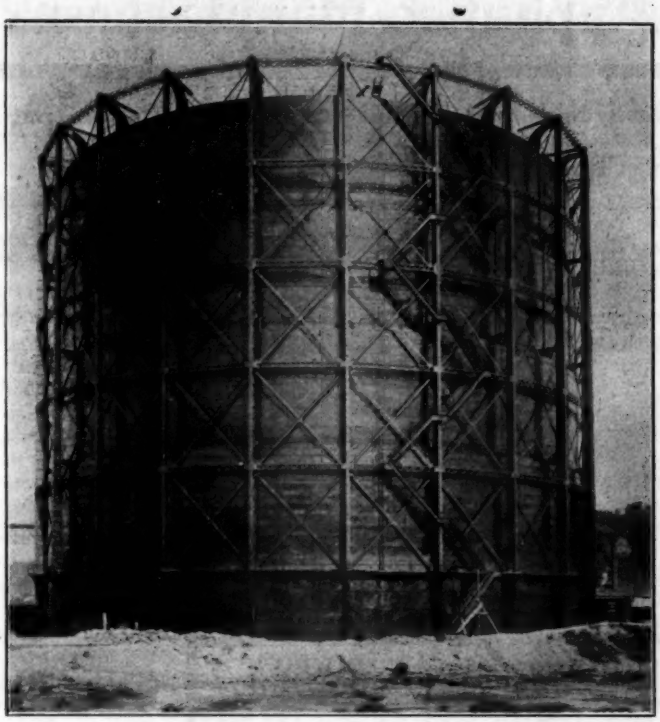
J. S. RIDER, of Lynchburg, Va., has been appointed general manager of the Rome Municipal Gas Company, of Rome, Ga. He succeeds F. J. Cahill.

LAFAYETTE HANCHETT has been elected president of the Utah Power & Light Company, Salt Lake City, Utah, to succeed D. C. Jackling, who resigned. Mr. Hanchett is a prominent mining engineer, and assisted the former president in Government work at Nitro.

RITER-CONLEY CO.

PITTSBURGH, PA.

PURIFYING BOXES



STEEL TANKS

BUILDERS OF

TWENTY YEARS EXPERIENCE **GAS HOLDERS** HAS TAUGHT US HOW

STEEL CONSTRUCTION OF ALL KINDS

Philadelphia	Pottstown	Detroit	Chicago	Cincinnati
Washington	New York	Boston	Syracuse	San Francisco

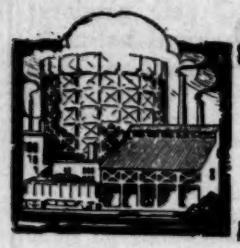
GAS PURIFYING MATERIALS

NATRONA RED ORE
To Be Mixed With Fluffing Material

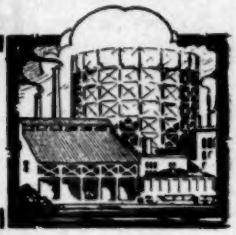
MINERAL SPONGE
The Best Fluffing Material

MINERAL SPONGE OXIDE
Prepared For Use

PENNSYLVANIA SALT MFG. CO.
WIDENER BUILDING
PHILADELPHIA - - - - - - - PENNA.



With The Equipment & Appliance Manufacturers

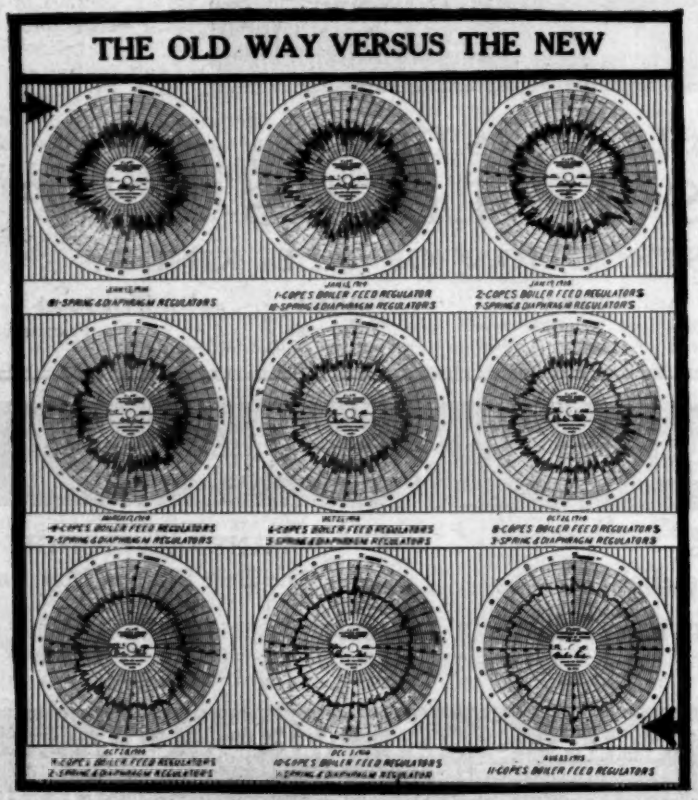


Conducted by Business Department of American Gas Engineering Journal

Economy in the Boiler Room

The Northern Equipment Company, Erie, Pa., recently issued a catalogue entitled "Saving Fuel Automatically and Scientifically in the Boiler Room." It describes the Copes boiler feed regulator, and explains in detail just how proper feed-water regulation not only saves fuel but increases the efficiency of the boilers. It is claimed that "variable feed-water injection with a steady load is disastrous to uniform steam pressure. Variable steam pressure, in turn, causes juggling of fires and short periods of loafing with consequent loss in efficiency of boilers and auxiliaries. However, with loads that have a periodic fluctuation, variable feed-water injection, if properly handled, aids the maintenance of the steam pressure. When the load is high, the feed is decreased and as the load drops the feed is increased, utilizing the heat absorbed by he boiler and admitting of fairly constant furnace conditions. This condenser action or heat-storage effect of the feed water is quite appreciable and is taken advantage of by intelligent water tenders. The matter of correct boiler feeding in the majority of cases is not given the attention it deserves, as the results of improved methods of boiler feeding are felt in the operation of the whole station as well as in the size of the coal pile."

THE COMPLETE, ASSEMBLED, COPES BOILER FEED REGULATOR



ILLUSTRATING THE SMOOTHING-OUT EFFECT OF COPES REGULATORS

The accompanying chart is of water input to a battery of twelve boilers. One after the other the spring, diaphragm and float regulators were removed and continuous proportional feed substitute. The water input gradually straightened out as additional continuous feed regulators were installed.

These results of continuous proportional feed described were obtained with the Copes Regulator. This regulator consists of an expansion tube of special metal connected by a lever and strut to a weighted balanced regulating valve. The expansion tube is usually set at an inclined position at the middle gauge. The upper end is about three or four inches above and the lower end about three or four inches below middle gauge. The upper end is connected to the steam space and the lower end to the water space. The water level in the tube is the same as the level in the boiler.

The water in the water connection cools off to about room temperature and becomes the cooling agent, and the steam which is always at boiler temperature is the heating agent. More water in the tube shortens the tube and the valve closes. Conversely more steam in the tube lengthens the tube and the valve opens.

Thus the regulator links up scientifically the water level, the steam output and the water input.